IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

ABS GLOBAL, INC.,

Plaintiff/Counterclaim Defendant,

v.

INGURAN, LLC d/b/a SEXING TECHNOLOGIES,

Defendant/Counterclaim Plaintiff,

and

XY, LLC,

Intervenor-Defendant/Counterclaim Plaintiff,

v.

GENUS PLC,

Counterclaim Defendant.

OPINION AND ORDER

14-cv-503-wmc

INGURAN, LLC, CYTONOME/ST, LLC,
and XY, LLC,

Plaintiffs/Counter Defendants,

v.

ABS GLOBAL, INC., GENUS PLC
and PREMIUM GENETICKS (UK) LTD.,

Defendants/Counter Claimants.

OPINION AND ORDER

17-cv-446-wmc

These consolidated cases are set for a jury trial commencing September 3, 2019. In advance of the final pretrial conference ("FPTC") scheduled August 15, 2019, the court issues the following opinion on the parties' respective motions *in limine* and related motions. For purposes of this opinion, the court will refer to ABS Global, Inc., Genus PLC and Premium Geneticks (UK) Ltd. collectively as "ABS" and to Inguran, LLC,

Cytonome/ST, LLC and XY, LLC collectively as "ST."

OPINION

I. ABS's Motions

A. Motion for Leave to Serve Supplemental Expert Report of Dino Di Carlo, Ph.D. (dkt. #286)[1]

ABS seeks leave to supplement its technical expert Dino Di Carlo, Ph.D.'s report in three respects: (1) extend his invalidity opinion offered with respect to the Weigl prior art reference under a heading for the '309 patent to the '476 patent; (2) include in his written report an opinion that the ramp at Detail C of the GSS chip focuses from the top and bottom, as explained in his deposition testimony; and (3) add a non-infringement theory concerning ABS's GigaSort chip. (Dkt. #286.) Not surprisingly, ST opposes all three of these proposed supplements.[2]

As ABS acknowledges in its opening brief, a motion to supplement an expert report is governed by Federal Rule of Civil Procedure 16(b)(4), which requires "good cause" to amend a scheduling order. In determining whether good cause exists, the court considers: "(1) whether the moving party acted diligently; (2) whether the amendments or supplements appear to be the legitimate product to newly-produced discovery disclosures; and (3) whether the opposing party is prejudiced by consideration of new or amended" expert opinions. *Split Pivot, Inc. v. Trek Bicycle Corp.*, No. 12-CV-639-WMC, 2013 WL

[1] Unless otherwise noted, the citations to the record are to Case No. 17-cv-446.

[2] Also before the court is ST's motion for leave to file a sur-reply. (Dkt. #307.) That motion is granted, and the court has reviewed the sur-reply.

12234526, at *3 (W.D. Wis. May 2, 2013).

As for the first two areas of supplementation, the court agrees with ABS that Di Carlo's basic opinions had been previously disclosed. As such, while the supplementation is prudent to ensure that both ST and the court are not caught off guard during trial, neither supplement clearly constitutes a new opinion requiring formal supplementation. Specifically, with respect to the first area of supplementation concerning Weigl, Di Carlo's original invalidity report contained the following paragraphs:

> 1590. Alternatively, Weigl discloses that focusing is provided in at least a first direction at junction 41 and in at least a second direction different from the first direction at region 26b.
>
> 1591. Specifically, as discussed above, the sheath fluid entering through inlet junction (41) provides focusing in at least a first direction. At junction 41, sheath fluid is focused around the bottom of the particles, "concentrically surround[ing]" the center fluid or sample with sheath fluid. Weigl at 12:6–8. This focuses the sheath fluid around the particles in at least a first direction (along the bottom of the particles and focuses the particles away from the bottom of the flow channel). The degree of focusing that occurs is greater when the depth of the channel does not increase.

(Di Carlo Invalidity Rept. (dkt. #129) ¶¶ 1590-91.) While ABS points out that this discussion was under a heading for the '309 patent, the same discussion of Weigl appears equally relevant to the '476 patent, which also discloses two focusing regions or steps. Moreover, although ABS's principal argument with respect to the invalidity of the '476 patent as anticipated by Weigl rested on a claim construction, which the court rejected, Di Carlo disclosed an "alternative" theory involving junction 41 as the first focusing area and region 26(b) as the second focusing area.

In opposition to this supplemental opinion, ST would have the court ignore Di Carlo's alternative opinion, and instead directs the court to Di Carlo's opinion of Weigl based on region 21(b) being the primary focusing region. (ST's Opp'n (dkt. # 292) 6.) Of course, this simply ignores that Di Carlo's alternative theory had placed ST on notice that, should the court rejected ABS's claim construction of "primary focusing area," then this alternative would still be a basis to find that Weigl anticipated the '476 patent. Therefore, this proposed supplementation is nothing more than a simple clarification, which should come as no surprise to ST and will be allowed.

With respect to the second area of supplementation, Di Carlo did not disclose in his infringement reports that the ramp in the GSS chip focuses from the top and bottom. ABS first attempts to argue that ST's expert Vacca made such a disclosure, but the court previously rejected that same argument in its opinion on the parties' motions for claim construction and summary judgment. (4/29/19 Op. & Order (dkt. #280) 39.) As for Di Carlo, he previously disclosed an opinion that the ramp in the GSS chip focuses from the top and bottom in his deposition testimony. (Di Carlo 12/20/18 Dep. (dkt. #239) 247 (explaining that the ramp "would focus from the top and bottom of the channel," because the ramp "is squeezing the sample" and thus "focusing from the top and the bottom"). When pressed by ST's counsel that this opinion was different from what was disclosed in his report, Di Carlo responded, "In my . . . report I describe the ramp as focusing away from the bottom wall. My opinion on that has changed." (Di Carlo Dep. (dkt. #239) 254.

Di Carlo then further explained that his initial noninfringement opinion principally

concerned the "primary focusing region" as the "first" focusing region claim construction now rejected by this court. Understandably, given competing claim construction theories and the number of patent claims at issue in this case, Di Carlo did not flush out in his written report this opinion that the ramp in Detail D also focuses from the top. Nonetheless, ST was on notice of this opinion by the time of his deposition in December 2018, and, therefore, has no claim of prejudice.[3]

ST fairly points out that Di Carlo failed to develop this opinion about Detail D's ramp focusing from the top and bottom into a theory of noninfringement of the '476 patent based on the "direction" limitation. When asked during his deposition how this new opinion affected his noninfringement opinions, Di Carlo responded, "I don't know how it affects my opinions. It may or may not," and "I haven't thought about it completely, but it may not be relevant, it may be relevant. Depends on, you know, other details. I'm not sure." (Di Carlo 12/20/18 Dep. (dkt. #239) 258-59.) Based on this exchange, while Di Carlo will be permitted to offer his opinion that the ramp focuses from the top and bottom, he will not be permitted to rely on it in arriving at any ultimate opinion as to noninfringement of the '476 patent. Instead, ABS's counsel will have to connect those dots as part of closing argument.[4]

[3] In fairness, Di Carlo's original report was filed July 23, 2018; rebuttal was filed August 27, 2018; and opening claim construction/summary judgment briefs were filed September 20, 2018, a few months before Di Carlo's deposition. Were this not a relatively minor supplement and still well before trial, the timing of his deposition may have been sufficient to strike this new opinion. Moreover, the court would entertain some limited, supplemental rebuttal as to this opinion, if proposed in writing by the end of this week.

[4] At the same time, ST's counsel may open the door to Di Carlo reaching that conclusion if it attempts to get Di Carlo to acknowledge that his view of the ramp has no bearing on any noninfringement opinion.

The third area of proposed supplementation of Di Carlo's expert opinions requires a different set of considerations. ABS seeks to add an opinion that ST's GigaSort chip does not practice the Cytonome patents. ABS acknowledges that this *is* a wholly new opinion, not one disclosed either in Di Carlo's prior report or deposition testimony. Nonetheless, ABS contends that the supplementation should be allowed as a response to ST's May 20, 2019, "supplemental response to a contention interrogatory disclosing that the 'current design of the GigaSort microfluidic kits' does practice at least some of the asserted claims." (ABS's Mot. (dkt. #286) 9 (quoting Horowitz Decl., Ex. B (dkt. #287-2) 19).)[5]

Specifically, in support of its new, supplemental contention in late May, ST points to two documents that show a slightly different chip design. (Horowitz Decl., Ex. B (dkt. #287-2) 20 (referring to "previously-produced documents Bates-numbered CYTST 003366 and CYTST 003391 at 94").) ABS points out that ST's position is in conflict with the position that it maintained during the claim construction hearing -- that if the court adopted ABS's "direction" claim construction, then it would exclude ST's commercial embodiment, the GigaSort chip -- although that brief discussion during the hearing did not clearly concern the new or current design. (2/8/19 Hr'g Transcript (dkt. #245) 70-71.)

In response, ST argues that it had already disclosed the same contention regarding the GigaSort chip (or at least the chip disclosed in these two documents) in a 30(b)(6) deposition of Cytonome's Chief Technology Officer, Dr. Johnathan Sharpe, dating back to

[5] The court notes that ABS filed this motion to supplement Di Carlo's report in June, shortly after that supplemental response; the court, however, opted to address it as part of this opinion on the parties' motions *in limine*.

October 11, 2018. (ST's Opp'n (dkt. #292) 12 (citing Sharpe 30(b)(6) Dep. (dkt. #256).) During that deposition, in response to questions from ABS's counsel and in reference to CYTST 003366, Sharpe testified that the design was the current version of the GigaSort chip, and while expressing reluctance to "go into specifics," he further described how this design reads onto the Cytonome patents. (Sharpe 30(b)(6) Dep. (dkt. #256) 64-67.) ST further points out that this deposition took place *two months* before Di Carlo's December 11, 2018, rebuttal report on damages, meaning he had ample time to address whether the current design of the GigaSort designs were covered by the Cytonome patents in that report.

Here, the court agrees with ST. ABS was on notice of ST's theory that the current version of the GigaSort chip practiced the Cytonome patents, consistent with the court's claim construction of the "direction" term. Of course, ABS is free to challenge in the damages phase whether the new design actually meets the requirement, but ABS has failed to demonstrate good cause for Di Carlo's very late supplementation, and therefore the court will deny ABS leave to amend his report to add the third area of supplementation. For these reasons, ABS's motion for leave to serve supplemental expert report is GRANTED IN PART AND DENIED IN PART.

B. Motion to Clarify the Court's Claim Construction Order (dkt. #320)

In this motion, ABS seeks clarification of the court's claim construction decision, rejecting a construction of "primary focusing region" to mean "the first focusing region," and adopting ST's construction that "primary focusing region" simply means "a first focusing region" relative to a "secondary focusing region." (4/29/19 Op. & Order (dkt.

#280) 33-35.) Specifically, ABS seeks clarification that this decision "does not foreclose the argument that ST has not met its burden to prove infringement of the remaining claims of the '476 patent on the ground that an admittedly 'primary' region does not '*extend downstream* of the sample injection site,' as those claims require." (ABS's Mot. (dkt. #320) 2.)[6]

In response, ST argues that ABS is effectively seeking a "mulligan" on claim construction, given that the court already considered and rejected ABS's proposed claim construction of "primary focusing region." While the court considered -- and rejected -- ABS's argument that "extending downstream of the sample injection site" supported its construction of "primary focusing region" to be "the first focusing region," the court neither construed the phrase "extending downstream of the sample injection site," nor otherwise relied on that phrase to construe "primary focusing region." Instead, in construing the latter term, the court simply rejected an argument that "primary" was limited to "*the* first" as opposed to a first relative to a second.

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[6] Claim 1 of the '476 patent requires:

> **1.** A sheath flow structure for suspending a particle in a sheath fluid, comprising:
>
> a primary sheath flow channel for conveying a sheath fluid;
>
> a sample inlet intersecting the primary sheath flow channel at a sample injection site for injecting a particle into the sheath fluid conveyed through the primary sheath flow channel;
>
> a primary focusing region *extending downstream of the sample injection site* for focusing the sheath fluid around the particle in at least a first direction; and
>
> a secondary focusing region provided downstream of the primary focusing region for focusing the sheath fluid around the particle in at least a second direction different from the first direction.

('476 patent at 11:9-23 (emphasis added).)

Here, neither party asked the court to construe "extending downstream of the sample injection site," presumably based on the belief that such a construction was not necessary and the jury could simply apply the plain meaning. Moreover, the court agrees. Accordingly, ABS is free to argue that this limitation is not satisfied because ST has failed to identify a first focusing region "extending downstream of the sample injection site," just as ST may argue the opposite. Nothing about this opinion, however, endorses ABS's apparent argument that, to satisfy this limitation, the focusing area must be "adjacent to" the sample injection site.[7] As such, this motion is GRANTED.

C. Motion to Try Willfulness Separately (dkt. #324)

Next, ABS requests an order for a separate, third phase of trial on willfulness after a determination of compensatory damages. The decision to try any issue separately lies within the general discretion of the court. Fed. R. Civ. P. 42(b). In three recent patent cases, this court opted to conduct a third trial phase to address willfulness. *DSM v IP Assets, B.V. v. Lallemand Specialties*, No. 16-cv-497 (W.D. Wis. May 20, 2018) (dkt. #337 at 72-73); *Wis. Alumni Research Found. v. Apple, Inc.*, 135 F. Supp. 3d 865, 882-83 (W.D. Wis. 2015); *Ameritox, Ltd. v. Millennium Health, LLC*, 101 F. Supp. 3d 800, 808 (W.D. Wis. 2015). In each of these cases, the court determined that trifurcation was prudent because of concerns about prejudice to the defendant or confusion on the part of the jury in managing evidence concerning the many *Georgia Pacific* factors with unrelated evidence of

[7] If ABS has a basis to argue that this is how ST's expert Dr. Vacca applied the phrase, it may point that out to the jury, but neither side may argue that the jury may apply any construction other than the plain meaning of the phrase itself.

willfulness. [8]

Here, ABS contends willfulness should be taken up separately because ST has indicated an intent to rely in part on events and evidence from the prior case, *ABS I*, No. 14-cv-503. Specifically, ST disclosed in discovery its basis for asserting ABS's infringement was willful included: (1) "as part of the prior litigation, ST and XY provided ABS and Genus with a then-complete list of patents owned or licensed to ST/XY, including five of the seven patents asserted here;" (2) "in the first litigation between ST and ABS, ABS unsuccessfully attempted to obtain a remedy form the Court that would have included a license to all of the ST, XY, and Cytonome patents that relate to sperm sorting;" and (3) "ABS has monitored the issuance of sexed semen patents as part of its research and development activities," which relies on deposition testimony from *ABS I*. (ABS's Br. (dkt. #325) 3 (quoting Horowitz Decl., Ex. 2 (dkt. #327-2) 20-21.) ABS also states that in defending against willful infringement, it intends to introduce evidence unrelated to any evidence presented for an award of a reasonable royalty.

In response, ST argues that trifurcation would be inefficient and prejudicial to it, primarily relying on its needs to recall three witnesses for that phase specifically: ST's expert Dr. Giacomo Vacca; ST's CEO Juan Moreno; and ABS's Chief Scientific Officer Dr Jonathan Lightner. While the court certainly recognizes certain potential inefficiencies with this approach, and notwithstanding the apparent experience of other courts who may

[8] At least one study supports reason for concern with a jury's consideration of evidence of willful infringement with other issues. *See* Jeremy Taylor *et al.*, The New Reality of Patent Trial Post-Halo, *Law360* (Nov. 13, 2018), law360.com/articles/1100983 (finding that juries "find infringement much more often when willfulness is tried" in the same phase).

choose not to bifurcate or trifurcate, the court has seen little by way of inefficiency, since only additional evidence will be allowed into the third phase of trial. Moreover, for the same reasons it has opted to trifurcate in the past, the court finds that trying willfulness as a separate phase after the damages phase is the best approach to prevent prejudice of otherwise irrelevant evidence seeping into the jury's consideration of compensatory damages here. While the court will, therefore, GRANT this motion, it will be open to suggestions by either side at the FTPC as to how best to accommodate witnesses (e.g., by allowing them to be recalled by live video testimony) or otherwise streamline the fair and efficient presentation of evidence at each phase of trial.

D. Motion to Exclude Inadmissible Opinions of ST's Damages Expert James E. Malackowski (dkt. #329)

ABS raises four challenges to ST's damages expert James Malackowski's proposed testimony, arguing that flaws in his analysis render his opinions unreliable, and, therefore, inadmissible. The admissibility of expert testimony in federal courts is governed principally by Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Rule 702 provides that:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and

> (d) the expert has reliably applied the principles and methods to the facts of the case.

A district court functions as the "gatekeeper" to ensure that expert testimony meets the requirements of Rule 702. More generally, the court must determine whether a party's proffered expert testimony is relevant and reliable. *Daubert*, 509 U.S. at 589; *see also United States v. Johnsted*, 30 F. Supp. 3d 814, 816 (W.D. Wis. 2013) (expert testimony must be "not only relevant, but reliable"). Although expert testimony is "liberally admissible under the Federal Rules of Evidence," *Lyman v. St. Jude Med. S.C., Inc.*, 580 F. Supp. 2d 719, 723 (E.D. Wis. 2008), it must satisfy the following three-part test:

> (1) the witness must be qualified "as an expert by knowledge, skill, experience, training, or education," Fed. R. Evid. 702;
>
> (2) the expert's reasoning or methodology underlying the testimony must be scientifically reliable, *Daubert*, 509 U.S. at 592-93; and
>
> (3) the testimony must assist the trier of fact to understand the evidence or to determine a fact in issue. Fed. R. Evid. 702.

Ervin v. Johnson & Johnson, Inc., 492 F.3d 901, 904 (7th Cir. 2007). Finally, as the Supreme Court reminded courts in *Daubert* itself, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are [still] the traditional and appropriate means of attacking shaky but admissible evidence." 509 U.S. at 596.

1. Challenge to Per-Unit Revenue Figure

ABS argues that Malackowski bases his reasonable royalty calculation on revenue from straws of sexed semen, rather than what it argues is the smallest, saleable patent practicing unit, resulting in an unreliable calculation of damages. As both parties recognize, reasonable royalty damages "must be awarded 'for the use made of the invention by the

infringer.'" *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 66-67 (Fed. Cir. 2012) (quoting 35 U.S.C. § 284). As such, "[w]here small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product." *Id.* Because of this concern, royalties generally must be based on the "smallest salable patent-practicing unit." *Id.* (citation omitted).[9]

As an overview, Malackowski used three methods or "royalty indicators," as ST characterizes them, to support his per-unit royalty number. Under the first method, Malackowski: (1) determined the average per-unit revenue per straw; (2) subtracted the costs, to determine the per-unit profit margin; (3) further deducted the profit margin that ABS realized on its sales of conventional semen in an attempt to isolate the profit attributable to the sex-sorting feature of the SEXCEL product; (4) multiplied that number by 50% to account for the value attributable to the Cytonome patents; and (5) assigned 60% of that amount to ST based on an assumption that the parties would have split the profits 60/40. (ST's Opp'n (dkt. #388) 5.)

ABS argues that Malackowski's reliance on the SEXCEL product as the foundation for calculating its royalty renders this method fatally flawed, since ABS uses the accused GSS technology to: (1) provide sperm sex-sorting services for others; and (2) to make SEXCEL sexed semen for sale to ABS customers. ABS further asserts that in selling SEXCEL, therefore, ABS is selling more than just semen-sorting services and that

[9] The exception, of course, is the entire market value rule, but ST does not argue that this rule applies here. *LaserDynamics*, 694 F.3d at 67.

additional value is reflected in the prices, resulting in a greater gross profit for ABS. (ABS's Mot. (dkt. #331) 11.) Because Malackowski relied on SEXCEL sales alone to determine the basis for determining the royalty, therefore, ABS contends his is a flawed, unreliable starting point.

In response, ST explains that Malackowski used the "total number of sexed semen straws that ABS produces with the infringing GSS machines and then sells (whether in the form of the Sexcel straws that it produces from its own bulls, or the straws that it processes under its third-party sorting contracts)." (ST's Opp'n (dkt. #388) 8.) ST further explains that Malackowski opted to include the SEXCEL straws in his analysis because ABS's sorting services is a relatively new and negligible part of its business, resulting in more limited sales and profit data. Based on this explanation, the court will allow Malackowski to begin with SEXCEL straws as the starting point in rendering his analysis, since straws appear to be the smallest saleable unit (or at least ABS fails to suggest a smaller one). Instead, ABS's sophistry aside, a determination of the reliability of Malackowski's method actually turns more on his purported efforts to account for the non-invention components of the GSS technology.[10]

In particular, using SEXCEL straws, Malackowski purports to account for the non-invention components of that product (e.g., the genetics of ABS's bulls, ABS's brand, its manufacturing know-how, its workforce and the business risks taken) by deducting the gross profits ABS generates from its *conventional* semen products. ABS argues that this

[10] Of course, ABS is free to challenge Malackowski's decision to make SEXCEL straws the starting point in his reasonable royalty rate during cross-examination, competing testimony, and closing argument consistent with the court's instructions to the jury.

analysis is incomplete because he failed to account for the fact that ABS uses "higher quality semen in its SEXCEL product, compared to that used in its conventional semen products." (ABS's Mot. (dkt. #331) 12.) ST responds by arguing that "any difference between the available genetics in ABS's Sexcel and conventional semen products is offset by the significant extent to which sales of the former help fuel sales of the latter." (ST's Opp'n (dkt. #388) 13 (citing Malackowski Rept. (dkt. #211) 89 n.569).) While Malackowski's explanation for failing to account for the different quality of sperm used in these two products strikes the court as a stretch, the court is skeptical that this reasoning *alone* renders it so unreliable as to warrant excluding it altogether.

Of course, ABS remains free to challenge Malackowski's assumptions that by relying on a per-unit profit margin he has sufficiently isolated the sex-sorting element of the SEXCEL product despite exceeding by $5 per unit that of ABS's sex-sorting semen product itself.

Regardless, in light of continuing questions about the method by which Malackowski purports to have isolated the value of the infringing GSS technology in the SEXCEL product (particularly the seeming arbitrariness of a 50% allocation of the value of the Cytonome patents, while assigning a 50% reduction for other technology contributing to advances in sex sorting or the value ABS's other contributions to semen input, manufacturing process and marketing), the court will RESERVE on this portion of the motion until hearing further argument and clarification at the FPTC. Were the court to permit such a substantial per unit royalty to be uttered to the jury, the court would also need to consider what the implications are of such a royalty being sought when seemingly

equally, if not substantially more, impressive improvements in same sex sorting resulted in much smaller royalties in ABS I.

2. Challenge to Cost Calculation

Next, ABS challenges Malackowski's reliance on a 2013 ABS estimate of variable costs for two reasons. First, ABS contends that Malackowski's analysis is unreliable because he failed to account for any fixed costs, directing the court to its opinion in *ABS I* in which it criticized ABS's expert on antitrust damages for his failure to exclude fixed costs from his calculation. (ABS's Mot. (dkt. #331) 14 (citing 8/9/16 Opinion & Order ('503 dkt. #666) 21-23).)[11] In response, ABS argues that the expert in *ABS I* was calculating antitrust damages, whereas Malackowski is calculating patent damages using *Georgia-Pacific* factors. This explanation is only partially availing. Specifically, ST fails to explain why the differences in damages should excuse Malackowski from including fixed costs in his calculation, notwithstanding evidence that ABS's focus was on variable cost saving. However, this is a dispute that the jury will need to resolve, as ABS fails to cite any authority excluding a royalty expert from concluding that variable cost savings would drive one side's bargaining position [12]

Second, ABS challenges Malackowski's reliance on its 2013 variable cost projection

[11] The court reserved on the motion to exclude that expert's testimony, but, in the end, did not have to issue a decision, given the jury's finding in *ABS I* that ABS was not injured by ST's antitrust violation. (ST's Opp'n (dkt. #993) 17.)

[12] The court notes that Malackowski second method, in which he calculates "the per-unit amount that ABS anticipated saving by self-supplying its own sexed semen with the GSS technology, rather than continue using ST's sorting services," rests on this same 2013 cost projection. (ST's Opp'n (dkt. #388) 5.) As such, the court rejects this criticism for the second methodology as well.

since we now know that projection was significantly less than the actual amount of costs actually incurred; in other words, "[w]hy use a fictitious profit figure that ABS never achieved, when the actual profit figures were known and in hand, based on actual revenue and actual costs?" (ABS's Mot. (dkt. #331) 15.)[13] In response, ST argues that "Malackowski's use to the 2013 projection was absolutely proper since [only] it would have been available at the time of the hypothetical negotiation." (ST's Resp. (dkt. #388) 15.) The court agrees with ST that Malackowski's reliance on a 2013 projection is permissible. *See Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371, 1385 (Fed. Cir. 2001) ("In this case, the 1996 business plan and its projections for future sales were prepared by Infinite two months before infringement began. Thus, rather than being outdated for purposes of the hypothetical negotiation, those projections would have been available to Infinite at the time of the hypothetical negotiation. The fact that Infinite did not subsequently meet those projections is irrelevant to [its] state of mind at the time of the hypothetical negotiation."). Of course, ABS remains free to challenge Malackowski regarding any failure to account for actual cost figures in cross-examination, especially given his reliance on actual revenue data in calculating the reasonable royalty under method 1. Moreover, the relevance of actual cost experience should be the subject of an instruction to the jury. Accordingly, this portion of the motion is DENIED.

[13] ABS's attempt to argue that this is an abuse of the "Book of Wisdom" principle falls flat. The Book of Wisdom principle permits consideration of facts and events occurring after the hypothetical negotiation. *See Fromson v. W. Litho Plate & Supply Co.*, 853 F.2d 1568, 1575 (Fed. Cir. 1988), *overruled on other gronds by Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004). Nothing about that principle also forecloses consideration of facts occurring at the time of the hypothetical negotiation.

3. Challenge to Consideration of ST's Lost Profits

Finally, ABS challenges Malackowski's consideration of ST's lost profits as a "royalty indicator." Under this method, "Malackowski considered the per-unit profit that *ST* previously enjoyed under the sorting agreements with ABS, which profit would have been 'put at risk by the hypothetical license.'" (ST's Opp'n (dkt. #388) 6 (emphasis added).) ABS contends that consideration of ST's profit is inappropriate because: (1) this is not a lost profits case; and (2) "Malackowski makes no adjustment whatsoever to account for the level of revenue, profits, and market power ST would have achieved absent its unlawful practices." (ABS's Mot. (dkt. #331) 18.)

As for the first criticism, ST is not seeking lost profit damages; instead, Malackowski is simply considering ST's lost profits associated with ABS's business competition as a consideration for ST in any hypothetical negotiation. The Federal Circuit has approved of damages expert's considering this risk in arriving at a reasonable royalty opinion. *See Asetek Danmark A/S v. CMI USA Inc.*, 852 F.3d 1352, 1362 (Fed. Cir. 2017) ("To the extent that Dr. Mody's analysis referred to Asetek's per-unit profit on its cooling units, CMI's legal objection lacks merit. As we have recognized, a patent owner participating in a hypothetical negotiation would consider the profits on sales it might lose as a result of granting a license.").

As for the second criticism, ST argues that ABS never alleged, and certainly did not prove, "supracompetitive pricing" in *ABS I*. (ST's Opp'n (dkt. #388) 21.) As such, ABS argues ST has no basis to argue that its pricing and, in turn, its profits were inflated because of the antitrust violation found in *ABS I*. This criticism is an odd, confusing attempt to

meld antitrust pricing concepts and royalty considerations that has no reason to even be introduced in this patent damage trial by *either* side. Absent advanced leave of court, neither side is to introduce an earlier finding of monopolization, whether by the jury or the court in *ABS I*. Regardless, in no injury for any monopolistic behavior, the *ABS I* jury essentially found no basis to calculate any pricing benefit. It would hardly be fair for ST to now discount a royalty here on ill-gotten profits it was never required to disgorge.

As part of ABS's challenge to Malackowski's consideration of ST's profit data, ABS also challenges Malackowski's assumption that ABS and ST would have split its profit from the patented elements of its GSS technology 60/40, with 60% going to ST and 40% going to ABS, on the basis that the parties had no profit-sharing agreement and other half-developed arguments, but this ignores Malackowski's purported reliance on the parties' historic bargaining positions. As such, ABS's challenges fail to demonstrate that Malackowski's opinions are unreliable as a matter of law; ABS should simply explore his reasons for relying on the 2012 agreement through cross-examination and argue that such an allocation on the facts before the parties at the time of the hypothetical negotiation is unreasonable.

Accordingly, this portion of ABS's motions is DENIED.

4. Limitations to Testimony

Finally, ABS argues that Malackowski's opinions on patents that are no longer at issue, either because the court has granted summary judgment in ABS's favor on invalidity or noninfringement grounds, or ST has waived certain claims, should not be presented to the jury. ST agrees. As such, this portion of the motion is GRANTED AS UNOPPOSED.

Of course, nothing about this decision precludes Malackowski from presenting analysis that was originally relevant to both the XY patents and the Cytonome patents, recognizing that the jury may only consider it with respect to the two Cytonome patents still at issue in this trial.

E. Motion to Exclude Inadmissible Opinions of ST's Technical Expert Giacomo Vacca, Ph.D. (dkt. #334)

ABS also brings a *Daubert* motion as to ST's technical expert Giacomo Vacca, Ph.D. ABS raises three challenges to his planned testimony, which the court addresses in turn below.

1. Challenge to Commercial Success Opinion

In partial support of a jury finding that the Cytonome patents are nonobvious, Vacca opines that ABS's SEXCEL product is commercially successful. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966) (listing "commercial success" as one of the secondary considerations in determining obviousness). ABS argues that Vacca, a physicist, is not qualified to render an opinion that relates to the market for bovine sexed semen products nor to the commercial success of ABS's products. In response, ST argues that Vacca's opinion "relates to his expertise in microfluidics." (ST's Opp'n (dkt. #381) 5.) However, ST stops short of actually explaining *how* Vacca's opinion about the commercial success of ABS's product draws upon that expertise. To the contrary, as ABS describes in its brief, courts routinely exclude testimony by technical experts on the commercial success of the alleged infringing product on the basis that the expert is not qualified to opine on economic areas. (ABS's Mot. (dkt. #336) 9 (citing cases).) Having failed to establish

Vacca's qualifications to opine on the bovine sexed semen product market generally or ABS's success in that market specifically, the court agrees that Vacca is not qualified to opine on the commercial success of ABS's product.

That said, Vacca's opinion that ABS's product is commercially successfully appears to rest mainly on ABS's own documents describing the commercial success of its product. (ABS's Mot. (dkt. #336) 2 (citing Vacca Rept. (dkt. #131) ¶ 1206)); ST's Opp'n (dkt. #381) (citing Vacca Rept. (dkt. #131) ¶¶ 1206-07).) ST remains free to admit this evidence in support of a finding of the commercial success of ABS's product, and so, too, may Vacca explain the significance of such evidence to his opinion assuming accepted by the jury at face value, understanding that on cross-examination he may not claim any expertise as to whether the jury should do so.

In addition to challenging Vacca's qualifications to render an opinion on the market and the commercial success of ABS's product, ABS also challenges Vacca's opinion on the basis that he fails to "establish a nexus between demand and the merits of the alleged invention claimed in the Cytonome patents." (ABS's Mot. (dkt. #336) 8.) As the Federal Circuit has explained, "[a] nexus must be established between the merits of the claimed invention and the evidence of commercial success before that issue becomes relevant to the issue of obviousness." *Vandenberg v. Dairy Equip. Co., a Div. of DEC Int'l*, 740 F.2d 1560, 1567 (Fed. Cir. 1984). In other words, the commercial success of the infringer's product must be linked to the patented invention, rather than other, unrelated aspects of the product. Moreover, it is the patentee's "burden of production to demonstrate a nexus between the claimed design and the secondary considerations." *MRC Innovations, Inc. v.*

Hunter Mfg., LLP, 747 F.3d 1326, 1336 (Fed. Cir. 2014).[14]

Here, Vacca offer some analysis, albeit perhaps limited, tying ABS's description of the success of its product to the patented invention:

> Based on the documents I have reviewed, this demand appears to be tied to the benefits of the microfluidic chip. For example, an ABS document titled "GSS June 2015 update" (ABS_2017_00060921 at 60922) indicates that the "Benefits of Genus' technology" are: "Higher percentage of sperm [being] oriented properly for sex determination," "Sperm exposed to considerably lower pressure during processing," "Sperm are not passed through a nozzle, thus eliminating nozzle generated shear forces," and "Sperm are not exposed to the extremely high electrical charges generated by an electrostatic sorting system." Similarly, ABS has proclaimed that "[t]he IntelliGen Technologies process to develop sexed bovine genetics does not subject cells to the high pressures, electric currents and shear forces used in other sexed semen processes" and "[t]he result is a product that helps customers maximize their profitability and reach their end goals in a fast and efficient manner." See ABS_2017_00023813–817 (an ABS press release regarding agreement with Geno). These benefits are directly tied to the microfluidic chip. Furthermore, a "Design Review" document (ABS_00026616 at 26620) called microfluidic chip. Furthermore, a "Design Review" document (ABS_00026616 at 26620) called ABS's microfluidic chip the "heart" of the GSS system. To me, this indicates that any success by the GSS-produced semen (i.e., Sexcel) would be based on the chip that, for the reasons explained in my Infringement Report, embodies the inventions disclosed and claimed in the Cytonome Patents.

(Vacca Rept. (dkt. #131) ¶ 1207.)

[14] ST cites to *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1394 (Fed. Cir. 1988), a case that precedes *MRC Innovations* by almost 25 years, for the proposition that "[a] patentee is not required to prove as part of its prima facie case that the commercial success of the patented invention is *not* due to factors other than the patented invention." Nothing about this opinion, however, relieves ST from tying the commercial success of ABS's products to the Cytonome patents. Indeed, the next sentence of that opinion -- missing from ST's brief -- reads, "It is sufficient to show that the commercial success was of the patented invention itself." *Id.*

Unlike some general market analysis and conclusion that the product is a commercial success, this opinion at least draws upon Vacca's technical qualifications by tying ABS's description of the commercial benefits of its product to the patented features. As such, while ABS is free to challenge Vacca's conclusion and poke holes in his analysis, the court rejects this basis for excluding Vacca's opinion.

In sum, this portion of the motion is GRANTED IN PART AND DENIED IN PART. Vacca may not opine on the commercial success of ABS's product. Vacca may, however, draw a comparison between ABS's own description of the reasons for the commercial success of its product based on elements highlighted in ABS's documents and the features of the patented invention based on his expertise as to the latter.

2. Challenge to Weigl Calculations

Next, ABS seeks to exclude Vacca's opinion in his rebuttal report that while the prior art reference in "Weigl" claims that it "focuses," it does not actually "focus" as the court has construed that term. This opinion is arguably relevant to another secondary consideration -- "failure of others" -- as further support of Vacca's opinion of nonobviousness.[15] ABS argues that Vacca's opinion rests on calculations for which he provided little to no explanation, rendering his methodology unreliable.

As ST explains at length in its response with reference to Vacca's report, Vacca relied

[15] In response, ST argues that this opinion is also relevant to defending against ABS's invalidity as anticipated defense based on Weigl. (ST's Opp'n (dkt. #986) 8 (citing *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1378 (Fed. Cir. 2007) ("To 'anticipate,' the identical subject matter must not only be previously known, but the knowledge must be sufficiently enabling to place the information in the possession of the public.")).)

on Weigl's own data in Figure 8B, which shows the number of particles flowing at various velocities in the Weigl device. (ST's Opp'n (dkt. #381) 8 (citing Vacca Rept. (dkt. #131) ¶¶ 64).)[16] Vacca then converted the bar graph in Weigl to data points, and compared those data points to Poiseuille flow curves, which Vacca also explained by reference to its underlying calculations. (*Id.* at 9, 12; Vacca Rept. (dkt. #131) ¶¶ 66, 71, n.1.) Vacca also explained at his deposition that the flow curves using Poisuille's Law is a well-known formula in fluid dynamics. (Vacca Rept. (dkt. #131) ¶ 65; Vacca Dep. (dkt. #184) 203-207.)

While ABS is free to explore these calculations with Vacca, the court finds that they are adequately disclosed and explained in his report and appear to be based on "widely accepted scientific knowledge" generally found to be admissible. (ST's Opp'n (dkt. #381) 11 (citing cases).) Similarly, while ABS purports to challenge Vacca's analysis based on its own experimental work, purportedly showing that "Weigl-based designs actually do produce focusing" (ABS's Mot. (dkt. #336) 13), any evidence to the contrary does not form a basis to exclude Vacca's testimony on this subject. Accordingly, this portion of the motion is DENIED.

3. Challenge to Conception Date Opinion

Finally, with respect to Vacca, ABS seeks to exclude his opinion as to the conception

[16] ABS also faults Vacca for only analyzing the data in Figure 8B, but, as ST and Vacca explain, the data in Figure 8B was taken from the "sheath flow module" embodiment having two sheath fluid inlets, which is the embodiment shown in Figures 5A and 5B. Moreover, ABS and its expert Dr. Di Carlo rely on Figures 5A and 5B in support of ABS's own anticipation defense. (ST's Opp'n (dkt. #381) 9 n.2.)

date of the Cytonome patents. ABS contends that Vacca's testimony fails to address every limitation in the Cytonome patents, specifically arguing that Vacca provides no analysis on: "(1) the requirement in each asserted claim that the secondary focusing region focuses in a different direction than the primary focusing region; (2) the requirement in claim 11 of the '472 patent that the primary sheath flow channel divides upstream into two subchannels; and (3) the requirement in claim 15 of the '476 patent that the sheath flow channel structure include two stacked substrate layers." (ABS's Mot. (dkt. #336) 16.) *See REG Synthetic Fuels, LLC v. Neste Oil Oyj*, 841 F.3d 954, 962 (Fed. Cir. 2016) ("Conception must include every feature or limitation of the claimed invention.").

As ST explains in its opposition, Vacca reviewed the inventors' documents in offering an opinion on when the inventors conceived of and reduced to practice several critical limitations in the inventions. While Vacca may not have analyzed these documents to determine conception and reduction to practices dates for other limitations, there is no such requirement for corroborating evidence, such as Vacca's opinion. *See Fleming v. Escort, Inc.*, 774 F.3d 1371, 1377 (Fed. Cir. 2014) ("[N]one of the corroborating evidence . . . discloses each claim limitations as written. But the corroboration requirement has never been so demanding."). The court credits ABS's argument that Vacca's opinion does not conclusively demonstrate conception dates, but that does not undercut its relevance. Accordingly, this portion of the motion is also DENIED.

F. Other Motions *in Limine* (dkt. #339)

1. Bar evidence or argument concerning *IPR* proceedings

ABS seeks an order excluding all evidence and argument about the *IPR* proceedings,

initiated by ABS seeking review of the four Cytonome patents in this case. ABS directs the court to its order excluding any reference by ST to the IPR proceedings in *ABS I* in support of its motion. (7/22/16 Op. & Order ('503 dkt. #575) 18.) ST does not oppose this motion, except for purposes of impeaching ABS's technical expert Dr. Di Carlo to the extent his testimony conflicts with that provided during the *IPR* proceedings. Finding this exception warranted, this motion is GRANTED IN PART AS UNOPPOSED AND DENIED IN PART. Neither party should mention the *IPR* proceedings, except that a party may refer to sworn testimony provided during a prior administrative proceeding for impeachment purposes only.

2. Bar reference to stipulation of trade secret liability in *ABS I* or evidence or argument relating to Kathy Mean or ABS's Media protocols

ABS seeks to exclude any reference to the stipulation of trade secret liability in *ABS I* and the evidence underlying that stipulation, namely ABS's employee Kathy Mean's misappropriation of trade secrets. Here, too, ST does not oppose this motion, but argues for two caveats: (1) that if ABS opens the door in insinuating that ST is overly litigious, ST should be able to mention its successful trade secrets misappropriation counterclaim in *ABS I*; and (2) if any mention of trade secret liability in *ABS I* is excluded, then any mention of the jury's monopolization findings should also be excluded.

This motion is GRANTED AS UNOPPOSED. The court will address ST's requests for excluding any reference to it being overly litigious and to the jury's antitrust findings in its opinion and order on ST's motions in limine.

3. Bar evidence or argument that ABS's internal experiments in 2017 are evidence of "failure of others" and evidence of ABS's unaccused chip designs should be restricted to damages case

As discussed above in ABS's motion to exclude Dr. Vacca's testimony, ABS conducted internal experiments in 2016 and 2017 of a Weigl-based chip. ABS represents that ST intends to introduce this evidence as an example of "failure of others," a secondary consideration of obviousness. In its response, ST explains -- as it did in responding to Vacca's *Daubert* motion -- that it also intends to offer this evidence in support of a finding that Weigl either does not disclose focusing, as construed in the Cytonome patents, or its focusing is not enabled. (ST's Opp'n (dkt. #389) 4.) Regardless of the exact application of this evidence, ABS argues that it is not relevant because the evidence *post*-dates issuance of the Cytonome patents, citing to District of New Jersey's opinion in *Eisai Co. v. Teva Pharm USA, Inc.* 247 F.R.D. 440, 444 (D.N.J. 2007). (ABS's Mot. (dkt. #339) 9 ("Because evidence of failure of others focuses on the defects in the prior art, this secondary consideration 'is inherently limited to events pre-dating issuance of the patent.").

As ST details in its response -- and, to be fair, as ABS acknowledges in a footnote -- a number of courts have disagreed with the holding in *Eisai*. In particular, in *Allergan, Inc. v. Teva Pharm. USA, Inc.*, No. 2:15-CV-1455-WCB, 2017 WL 1319555 (E.D. Text. Apr. 10, 2017), Judge Bryson, sitting by designation in the U.S. District Court for the Eastern District of Texas, rejected *Eisai*, holding instead that "the dates of the failures do not necessarily render the evidence irrelevant," and that the failure of others after issuance of the patent "is at least potentially relevant to non-obviousness." *Id.* at *4. (*See also* ST's Opp'n (dkt. #389) 6-7 (citing cases).) Moreover, there is no dispute here that Weigl

constitutes prior art, nor, accordingly, that the Weigl invention *pre*-dates the Cytonome patents. Therefore, even if the holding in *Eisai* was binding, ABS's attempt to recreate the Weigl invention arguably still would be relevant to a "failure of others" analysis.

Regardless, ABS's motion ignores ST's stated intent to rely on this evidence to demonstrate Weigl is not enabled and, therefore, cannot anticipate the Cytonome patents. At the end of its motion, ABS also cryptically argues that "to the extent that alternative ABS chip designs are commercially viable, non-infringing alternatives, those other designs may be relevant to damages, but they have no relevance to liability," and "[p]laintiffs should therefore be barred from referring to ABS's unaccused chip designs during the liability case." (ABS's Mot. (dkt. #339) 10.) ST jumps on this language and readily agrees that neither side should mention ABS's alternative chip designs in the liability phase of trial. (ST's Opp'n (dkt. #389) 8.) While the court does not want to look for trouble, nothing about this agreement precludes ABS from presenting other evidence of its internal experiments suggesting that Weigl disclosed focusing. With that caveat aside, this motion is DENIED.

4. Bar evidence or argument about opinions of counsel except during willfulness phase of trial

ABS seeks to exclude any evidence or argument of opinions of counsel from trial except for the willfulness phase (whether that is tried as part of damages or in a third, separate phase). ST does not oppose this motion. Accordingly, this motion is GRANTED AS UNOPPOSED.

5. Bar evidence or argument relating to Cytonome research and development activities involving the use of microfluidics in sperm sorting

During a 30(b)(6) deposition of Cytonome's Chief Technology Officer, Jonathan Sharpe, he expressed concerns about disclosing Cytonome's research and development activities relating to fluidics, repeatedly stating that the questions made him "really uncomfortable," with his counsel explaining that his "reluctance is based on commercial sensitivity." (ABS's Mot. (dkt. #339) 12-13 (citing Sharpe 30(b)(6) Dep. (dkt. #256) 50, 56, 59-62).) ABS seeks to exclude any evidence or argument about Cytonome's research and development activities involving the use of microfluidics in sperm sorting on the basis that ST should not be allowed to use these concerns as a "sword and a shield." (*Id.* at 13.)

In response, ST argues that ABS's request is too broad in light of the full scope of Sharpe's deposition testimony. Specifically, ST lists numerous areas explored during the deposition where Sharpe provided information about Cytonome's research and development activities and use of Cytonome's patents in product development. (ST's Opp'n (dkt. #389) 9-10 (citing Sharpe 30(b)(6) Dep. (dkt. #256)).) In this way, rather than wielding a broad shield, ST argues that Sharpe voiced discomfort in talking about one product, the Viper SS, and even then, did answer questions, including that the Viper SS does not sort cells based on sex, while acknowledging that there were other products in development that relate to the Cytonome patents. (*Id.* at 10-11.)

The court is inclined to deny ABS's broad request to exclude any evidence or argument about Cytonome's research and development activities involving the use of microfluidics in sperm sorting, especially given its failure to open this issue sooner in

discovery, but will RESERVE on the motion pending argument at the FPTC as to whether reference to some narrower area of R&D should be excluded.

6. Bar expert testimony suggesting that ABS's single sheath chip is not a viable, non-infringing alternative or that ABS's SSC-B chip is less commercially viable than the single sheath chip

Next, ABS seeks to exclude ST from offering expert testimony during the damages phase that ABS's single sheath chip is not a viable, non-infringing alternative, or that ABS's newly-developed SSC-B chip is less commercially viable than the single sheath chip. ABS principally argues that ST's expert testimony was not timely disclosed as to these two opinions. As context, ABS explains that the SSC-B chip was not developed until later in discovery in this case. As such, the court extended discovery to allow ST to submit supplemental opening damages expert reports regarding ABS's claim that the SSC-B chip is a commercially viable non-infringing alternative and a deposition concerning those supplemental reports.

Neither ST's technical expert Vacca nor ST's damages expert Malackowski addressed whether the single sheath chip was a commercially viable alternative in their opening briefs. Malackowski, however, in his supplemental report offered testimony suggesting that the single sheath chip is not commercially viable. ABS argues that this opinion is untimely because: (1) it did not fall within the allowed area of supplementation limited to the commercial viability of the SSC-B chip; and (2) ST was aware of ABS's position that the single sheath chip was a viable commercial alternative at the time of Malackowski's initial report, demonstrated by the fact that Malackowski's evidence in his supplemental report for opining that the single sheath chip is not commercially viable was

disclosed well in advance of that report.

As for Vacca, ABS argues that he does not offer any opinion -- in either his original report or in the supplemental report -- about the commercial viability of the single sheath chip. Instead, Vacca states that the SSC-B chip would perform worse than the single sheath chip, but, ABS reasons, because he does not opine that the single sheath chip is not a commercially viable alternative, Vacca should not be able to opine that the SSC-B chip "is any less commercially viable than the SSC-A chip." (ABS's Mot. (dkt. #339) 16.)

In response, ST argues that "there is no realistic outcome of the liability phase of trial wherein the GSS chip infringes but the single sheath chip does not," given that ABS's technical expert did not offer an independent basis for non-infringement of the single sheath chip. (ST's Opp'n (dkt. #389) 12.) In other words, the infringement of the two chips rise and fall together.[17]

Putting aside doubt ST raises as to whether the commercial viability of the single sheath chip will be relevant to a damages calculation, ST argues independently that Malackowski's opinion about the lack of commercial viability of the single sheath chip in his supplemental report, dated January 24, 2019, was timely because ABS did not disclose

[17] The court questions if this is accurate given that ST appears to argue in its motions in limine a theory of infringement specific to the GSS chips, which involves Detail C as the primarily or first focusing region or step and Detail D (either the ramp or taper) as the second focusing region or step.

this theory until ABS's response damages report served December 11, 2018.[18] Specifically, ST argues that during the deposition of its corporate representatives, ABS refused to answer whether the single sheath chip was a non-infringing alternative. (ST's Opp'n (dkt. #389) 13 (citing Lightner 30(b)(6) Dep. (dkt. #108) 139-41; Appleyard 30(b)(6) Dep. (dkt. #185) 323-28).) As such, ST contends that it had no reason to have its experts explore the commercial viability of the single sheath chip as part of their initial reports.

ST mischaracterizes the privilege asserted by the corporate representatives. In Dr. Lightner's deposition, the attorney/client privilege concerned the scope of the patents-in-suit. (Lightner 30(b)(6) Dep. (dkt. #108) 139-41.) Lightner, however, agreed to testify about "alternative chip designs ABS has explored." (*Id.* at 141.) The problem is that the single sheath chip was an established product, not one that ABS had "explored" as an alternative design. In Dr. Appleyard's deposition, he invoked attorney/client privilege on behalf of ABS based on ST's counsel's questions about whether the single sheath chip was a design around of the patents in suit. (Appleyard 30(b)(6) Dep. (dkt. #108) 323.) Neither individual invoked privilege with respect to a question about whether the single sheath chip was a noninfringing alternative.

Instead, as ABS points out, in response to the question of whether ABS has any "commercially-ready alternative chip designs," Dr. Lightner responded, "[t]he single-

[18] ST also points out that it is ABS's burden as the alleged infringer to identify noninfringing, commercially viable alternatives. (ST's Opp'n (dkt. #994) 14 (citing cases).) Recognizing this tension, the court recently added rebuttal damages expert reports to its standard patent schedule, but the parties did not build this submission into the joint scheduled submitted by the parties, and accepted by Judge Crocker. (*See* dkt. #51.) Given the timing between ABS's expert's response submission of December 11, 2018, and Malackowski's supplement of January 24, 2019, the supplement nonetheless functions as a rebuttal of sorts.

sheath chip design is understood and validated and could be employed commercially." (Lightner 30(b)(6) Dep. (dkt. #108) 143).) Indeed, Malackowski acknowledged this testimony in the February 7, 2019, deposition, exploring his supplemental report. (Malackowski Dep. (dkt. #257) 216-217 (acknowledging that he read the 30(b)(6) deposition testimony of Lightner and Appleyard identifying the single sheath chip (also known as the SSC-A chip) as an alternative chip).) As such, the court agrees with ABS that it disclosed a theory that the single sheath chip is a noninfringing alternative to its GSS chip, placing ST and its damages expert on notice to explore this issue in his initial report. As such, the court will GRANT that portion of ABS's motion, finding Malackowski's opinion about the commercial nonviability of the single sheath chip was untimely.[19]

As for ABS's request to exclude Vacca's testimony that the SSC-B chip is "any less commercially viable than the SSC-A chip," the court agrees with ST that Vacca is free to testify consistent with his supplemental report, which includes comparison testimony about the performance differences between the single sheath ship and the SSC-B chip. For reasons already addressed, however, Vacca could not, and regardless, did not opine that the single sheath chip is not commercially viable. Accordingly, this portion of the motion is DENIED.

[19] ABS also argues that Malackowski's opinion should be excluded because he is not qualified to render an opinion on commercial viability, arguing that this requires technical expertise. The court is unpersuaded by this challenge. Malackowski relied on Vacca's opinion as well as statements from ABS's technical employees to form a sufficient basis to assess the commercial viability of the single sheath chip. (ST's Opp'n (dkt. #389) 15.) If this were the only challenge to Malackowski's opinion, the court would not strike it.

7. Bar testimony regarding reasonable royalty figures not disclosed in expert report or by witnesses who have not served expert reports

In a supplemental response to Interrogatory No. 5, ST disclosed a damages range that far exceeds the total damages award based on ST's expert Malackowski's per-unit reasonably royalty rate. In response, ABS seeks to bar any testimony about a reasonable royalty rate not disclosed in an expert report or by witnesses (e.g., ST's CEO Juan Moreno, who has not served an expert report).

ST offers two very reasonable responses. First, the total damages number disclosed in its supplemental response takes into consideration more recent sales figures, post-dating the period ending in March 2018 considered by Malackowski. ST further states that it does not intend to divert from Malackowski's *Georgia-Pacific* analysis or his per unit reasonable royalty. ST's plan to use more recent sales data to calculate the royalty base is entirely appropriate. Second, ST contends that while it does not intend to offer other damages theories than those espoused by its expert or have other witnesses weight the *Georgia-Pacific* factors, ST does intend to illicit fact testimony from Moreno relevant to the *Georgia-Pacific* analysis. This, too, is entirely appropriate.

As such, the motion is DENIED.

8. Bar testimony suggesting ST's GigaSort technology practices the Cytonome patents

ABS seeks to exclude testimony suggesting that ST's GigaSort technology practices the Cytonome patents. This motion touches on ABS's earlier motion to supplement the expert report of Dr. Di Carlo. As explained above, the court rejected ABS's argument that ST failed to disclose timely its theory that the current version of ST's GigaSort chip

practices the Cytonome patents. ST's 30(b)(6) designee Dr. Jonathan Sharpe disclosed the existence and possible relevance of the current GigaSort chip during his October 11, 2018, deposition. ABS does not challenge Dr. Sharpe's personal knowledge to testify about how this chip works, and, ABS does not contend (for good reason) that this testimony must be introduced by an expert. (*See* ST's Opp'n (dkt. #389) 22.) ABS also challenges whether the current version of ST's GigaSort chip "focuses" as that term was construed by the court, but this is a fact issue for the jury to determine, and not a basis for excluding Dr. Sharpe's testimony.

Accordingly, this motion is DENIED.

9. Bar ST's expert Malackowski from presenting evidence relevant only to damages of the XY patents

ABS seeks to exclude any testimony by ST's damages expert Malackowski that was only relevant to damages for claims of infringement of the XY patent. The court having granted judgment in ABS's favor on those patents, ABS argues that Malackowski's discussion of evidence only relevant to the XY patents should be excluded, including: "(1) the terms of license to the XY patents, (2) the terms of licenses to patents that may be comparable to the XY patents, and (3) the commercial success of semen sorted by technology that allegedly practices the XY patents." (ABS's Mot. (dkt. #339) 25.)

In response, ST contends that neither it nor Malackowski "intends to present any evidence at trial that truly is relevant *only* to the XY Patents (or to reference any damages flowing from ABS's use of the XY Patents)," but it contends that some evidence relevant to Malackowski's damages calculations for the XY patents is also relevant to his damages

calculations of the Cytonome patents. (ST's Opp'n (dkt. #389) 24.) It appears that the parties generally agree as to the appropriate scope of Malackowski's testimony, although there appears to be some disagreement as to the relevance of ST's sorting service sales and of ABS's associated downstream sales of ST-processed "Sexation" product, along with evidence about the competitive posture of ST and ABS, which apparently touches on technology that practices the XY patents.

Accordingly, the court will RESERVE on this motion pending argument at the FPTC as to any evidence or topics that may touch on the XY patents that ST contends remain relevant to the *Georgia-Pacific* framework for the Cytonome patents still in play.

10. Bar unnecessary and prejudicial evidence relating to ABS's desire to compete with ST

Finally, ABS seeks to "exclude testimony and documents from ABS employees to support [Malackowski's] conclusion that ABS and ST are competitors." (ABS's Mot. (dkt. #939) 27.) ABS contends that some of the evidence is prejudicial (e.g., an internal email that states "I can't wait to stick it to ST and take their business away! It is what gets me up in the morning!") and irrelevant to the question of whether ABS infringes any valid claim. (*Id.*) As such, ABS seeks to exclude this evidence altogether from the liability phase. As for the damages phase, ABS concedes that the evidence "may have some relevance to damages under the *Georgia-Pacific* factors," but contends that certain evidence should still be excluded because of its prejudicial effect, and because there is no dispute that ABS and ST are competitors -- even ABS's expert acknowledges the competitive relationship in her *Georgia-Pacific* analysis. (*Id.* at 28.)

In response, ST contends that the court should deny this motion because the "requested scope of relief is hopelessly vague and overbroad and could never be workably enforced." (ST's Opp'n (dkt. #389) 26.) As to the damages phase, the court generally agrees. The concerns raised in this motion are better addressed either in objections to exhibits or, if ST does not seek to admit the allegedly prejudicial documents, then in a hearing before Malackowski's testimony, where the court can review the specific, challenged documents on which he purports to rely. As for liability, however, ST will have to make a proffer as to the relevance of such evidence at the FPTC or leave it out altogether.

As such, this motion is GRANTED as to the liability phase barring a proffer and DENIED as to the damages phase, but without prejudice to ABS raising these concerns in objections to exhibits or in a hearing before Malackowski testifies.

II. ST's Motions

A. Motion to Exclude Testimony of Matthew Ebersole (dkt. #323)

ST moves to exclude the testimony of ABS's senior director of engineering Matthew Ebersole on the basis that ABS's disclosure -- at 4:52 p.m. on the last day of discovery -- deprived ST of the opportunity to depose him, and they would, therefore, be prejudiced by permitting him to testify at trial. ST also contends that ABS's disclosure is overbroad and unhelpful since it merely states that Ebersole is a person with knowledge of "ABS's gender-selected sperm technology." (ST's Mot. (dkt. #323) 2.)

In response, ABS explains that it disclosed Ebersole and listed him as a "may call" witness on its witness list because Dr. David Appleyard, who was timely disclosed and has

been deposed by ST, may not be available to testify at trial given that his wife is expecting twins in early September. ABS also argues that ST's account of limited knowledge of Ebersole during the course of discovery is inaccurate, directing the court to: (1) Appleyard's testimony that Ebersole filled the senior engineering position as of June 21, 2018; (2) testimony concerning Ebersole's involvement in supervising employees engaged in the "ongoing work on developing certain alternative chip designs"; (3) Ebersole's role in creating a "IntelliGen Technology Update" document explored by ST during Appleyard's testimony; and (4) Ebersole having negotiated an agreement with a company engaged in "alternative chip design research." (ABS's Opp'n (dkt. #369) 3; *see also id.* (referring to Lightner's testimony describing Ebersole's role).)

In light of these disclosures and Appleyard's possible conflict, ABS's disclosure of Ebersole as a person with relevant knowledge appears somewhat justified. Still, the court is also sympathetic to ST's position of being blind-sided by the addition of a new witness at the close of discovery. Accordingly, the court is inclined to grant this motion unless ABS can satisfy the court that Dr. Appleyard is truly unavailable, even by live video conference at trial or video deposition in advance of trial. If ABS can meet that steep burden, then the court will deny the motion but require ABS to: (1) make Ebersole available for a deposition, video or telephonic if that is preferred by ABS; and (2) limit Ebersole's areas of expert testimony to those already addressed by Appleyard, unless ST opens the door to more.

Accordingly, this motion is RESERVED pending an update on Appleyard's actual availability and arguments at the FPTC.

B. Motion to Exclude Enablement-Related Fact Testimony (dkt. #328)

This motion concerns the remanded enablement claim in *ABS I*. As context, the Seventh Circuit concluded that the jury's finding -- that independent claim 1 is enabled but dependent claim 2 is not -- was inconsistent, and, therefore, remanded for a new trial "on this aspect of the case." *ABS Glob., Inc. v. Inguran, LLC*, 914 F.3d 1054, 1076-77 (7th Cir. 2019). During trial in *ABS I*, ABS solely relied on its expert Dr. Paul Robinson in support of this counterclaim and defense. Now, in preparing for the second trial on remand, ABS has disclosed Dr. David Appleyard as a fact witness with testimony relevant to this defense.[20]

ST seeks to strike this testimony on essentially three bases: (1) ABS's disclosure of Appleyard on June 12, 2019, as a fact witness at trial on the issue of enablement is unfair give that ABS chose in *ABS I* not to call fact witnesses and should not now get a complete "do over"; (2) despite ABS's offer to produce Appleyard for a deposition on this topic, ST and its expert Dr. Nolan do not know the content of his testimony; and (3) either Appleyard's testimony is not relevant because ABS admits that it was not aware of the '987 patent until after it had developed the GSS technology, or if relevant, then it is impermissible expert testimony.

As for the first basis for excluding enablement-related fact testimony, while ABS did not ultimately choose to call fact witnesses for its enablement defense at trial in *ABS I*, ABS had disclosed three witnesses "having knowledge of ABS's laser-based method for

[20] In light of ABS's opposition to ST's motion to strike Matthew Ebersole's testimony on the basis that Appleyard may not be available to testify at trial, perhaps this motion is now moot, but the court will address it given the possibility that ABS is mistaken about Appleyard's availability.

producing sexed semen" (ABS's Opp'n (dkt. #383) 5.) All three witnesses -- Dr. Lightner, Dr. Faust and Mr. Schilffarth -- are no longer employed with ABS.[21] In its June 12, 2019, letter to ST notifying it of ABS's plan to call Dr. Appleyard to provide enablement-related fact testimony, ABS explained that it intended to call Appleyard *in place of* Dr. Faust and Mr. Schilffarth. While ABS disclosed these individuals as people with knowledge, it contends, is relevant to the enablement defense, and both were deposed about this knowledge, ABS did not *have* to provide enablement-related testimony at the prior trial.

In support of its motion, ST argues generally that it would be unfair for ABS to introduce any new evidence during this trial, especially given that the case was remanded because of an inconsistent jury verdict, and not because of an evidentiary ruling error on the part of the court. In support of this position, ST directs the court to its statement during the claims construction hearing in February after ABS suggested that it may need more time to prepare for the '503 trial on remand, "[t]hat's silly . . . . You were in trial. You tried those issues. You're ready to go." (2/8/19 Hr'g Transcript (dkt. #245) 158.) While the court believed (and still believes) that the trial of invalidity based on a lack of enablement of the '987 patent should be straight-forward given the fact that the parties have already tried this defense, the court did not intend for this statement to foreclose the introduction of new evidence. As ABS explains in its opposition, "courts have consistently held that parties may present different evidence in a retrial than was presented in the first

[21] ABS clarifies that while Dr. Lightner has left the company, he is expected to testify voluntarily, but given his role as Chief Science Officer, he "did not have the level of direct experience with the development of the technology that, for example, Dr. Faust or Dr. Appleyard did." (ABS's Opp'n (dkt. #383) 11.)

trial." (ABS's Opp'n (dkt. #383) 14 (citing cases).) The court, therefore, rejects a general prohibition on new evidence, assuming ABS properly disclosed that evidence or testimony during discovery in ABS I.

That brings us to a problem specific to Dr. Appleyard, since he was *not* involved in *ABS I.* As such, he necessarily was not disclosed as a witness, full-stop, and certainly not disclosed as a witness with special knowledge relevant to the enablement defense to the '987 patent. ABS explains, however, that the witnesses that were disclosed in *ABS I* and provided deposition testimony about the development of the GSS system -- the topic which ABS seeks to have Appleyard provide testimony -- are no longer employees, and, therefore, are unavailable to provide this testimony during the retrial. To ameliorate against any prejudice to ST, ABS reasonably offered in June, approximately three months before trial, to present Appleyard for a two-hour deposition, but ST declined that offer on the basis that it would still be prejudiced having to devote time to deposing Appleyard rather than prepare pretrial submissions. While the court is sympathetic to ST's predicament, it also strikes the court as overly rigid given the resources of both parties. Assuming Appleyard is still available for a deposition, and that the scope of his testimony is limited to the areas explored in Dr. Faust's and Mr. Schilffarth's prior depositions, the court is inclined to find that this offer ameliorates any remaining prejudice to ST.

Still, ST challenges the relevance of Appleyard's testimony, arguing that "factual testimony would be relevant to enablement only if the witness was personally involved with developing the accused product and had read the patent specification at issue." (ST's Mot. (dkt. #328) 10.) From this, ST argues that because there is no dispute that the GSS

technology was developed *before* ABS became aware of the '937 patent, Appleyard or other fact testimony by ABS employees is not relevant to the enablement defense. ST's framing of the evidence relevant to ABS's enablement defense is too narrow. As ABS explains in its opposition, "Dr. Appleyard will provide testimony that ABS devoted well over a year of research to the various obstacles that arose in developing a system to produce sexed semen by photo-damaging undesired cells." (ABS' Opp'n (dkt. #383) 9.)[22] ABS contends that this testimony is relevant to "show that nothing in the '987 patent remotely touches on how to solve any of the problems encountered by ABS in developing its GSS system." (*Id.*) This evidence would, therefore, appear relevant to the jury, at least for context, in determining whether, "at the time of filing the application, one skilled in the art, having read the specification, could practice the invention without 'undue experimentation.'" *Cephalon, Inc. v. Watson Pharms., Inc.*, 708 F.3d 1330, 1336 (Fed. Cir. 2013).

For these reasons, ST's concern that Appleyard's testimony will actually constitute impermissible expert testimony also falls flat. If Appleyard's testimony is limited to the topics described in ABS's opposition, then it fairly falls within the scope of permissible fact testimony. While the court is inclined to deny this motion -- assuming Appleyard is still available to be produced for a short deposition and his testimony is limited to the topics explored in depositions of Faust and Schilffarth -- the court will RESERVE pending further discussion at the FPTC.

[22] ABS also explains that regardless of this court's ruling on this motion, Appleyard will testify as to the development of the GSS system in support of a finding that the commercial success of the GSS system is the result of multiple factors, including technical features not covered by the Cytonome patent, ignoring that this testimony will not be relevant until the damages phase of trial.

C. Motion to Exclude Opinion Testimony of Dr. Charles Ostermeier (dkt. #333)

In addition to the patent claims, ABS is also pursuing a breach of contract counterclaim, based on ST's alleged failure to provide sorted semen straws "containing a Purity of approximately 87% but in no event, less than 85% Primary Gender sperm," as required under the parties' 2012 agreement. However, in its opinion and order on the parties' cross motions for summary judgment, the court rejected ABS's claim based on ST's failure to use a different method for measuring purity, one based on the "ddPCR tests," but did allow ABS to proceed on a claim based on whether ST "fudged" its compliance data. (4/29/19 Op. & Order (dkt. #280) 56-60.)

Nevertheless, ST seeks to exclude ABS's expert Charles Ostermeier from testifying at all on its breach of contract counterclaim on the basis that: (1) his testimony primarily concerns a theory based on ST's use of an inadequate testing method already rejected by this court; and (2) his testimony on other topics is either not helpful to the jury or does not rest on any specialized knowledge or skill, and instead rests simply on "common sense."

For its part, ABS concedes that much of Ostermeier's opinion is no longer relevant given the court's ruling on summary judgment, but contends that Ostermeier also offers relevant testimony, drawing on his scientific expertise in support of the remaining claim that "the gender purity data reported to ABS by ST was unreliable and inaccurate, 'even based on the methodologies employed by ST,' i.e., even based on the flow cytometry reanalysis. (ABS's Opp'n (dkt. #378) 8 (emphasis omitted) (citing Ostermeier Rept. (dkt. #142) ¶ 590).)

In the end, the parties appear to disagree as to whether four areas of planned

testimony constitute expert opinion and/or would be helpful to the jury. The court addresses each challenged opinion in turn. *First*, Ostermeier reviewed "data observed in 2014 and 2017 from ABS customers of ST sorted sexed semen, revealing that the percentage of female births was much lower than 8% in many instances," and he opined that "there is no biological reason that would explain the low results reflected in the real world data," specifically rejecting any theory that impaired or dead sperm could result in the discrepancy between ST's reported purity numbers and customers' experiences. (ABS's Opp'n (dkt. #378) 8 (citing Ostermeier Rept. (dkt. #142) ¶ 81; Ostermeier Suppl. Rept. (dkt. #230-1) ¶ 9).) The court finds this testimony is relevant and properly draws on Ostermeier's expertise.

Second, after reviewing ST internal documents raising concerns about the purity test results, Ostermeier opines that "the combination of a methodology that calls for subjective judgments and incentive payments tied to how often a sample passes under the given subjective metric is scientifically unsound," and could explain results overstating the actual purities. (Ostermeier Rept. (dkt. #142) ¶ 567.) In contrast, ABS contends that this opinion rests on Ostermeier's scientific experience and understanding of internal ST emails containing "scientific discussion among scientists." (ABS Opp'n (dkt. #378) 11.) However, ABS's mere labeling of these emails as "scientific" does not render Ostermeier's speculation that ST employees may have been motivated by financial incentives in fudging the test results within the scope of his expertise. Indeed, the court reviewed these same emails at summary judgment, and did not find the content difficult to unpack. As such, the court agrees with ST that Ostermeier's opinion expressed in paragraph 567 of his

original opinion is out. That said, Ostermeier may describe ST's testing method and how it relies on subjective judgments to measure purity.

Third, in paragraph 570 of his report, Ostermeier reviews ST internal documents and concludes that purity results that report a high percentage of "exactly 87%" are suspicious. (ABS's Opp'n (dkt. #378) 12 (citing Ostermeier Rept. (dkt. #142) ¶¶ 569-70).) From this, Ostermeier opines, "the statistic suggests that the results were unreliable, because greater variability in the results would be expected." (*Id.*) ST contends that this testimony is simply a regurgitation of the ST internal documents, some of which describe a November 2015 internal audit that reached the same conclusion as Ostermeier. While the court agrees with ST that this opinion is somewhat duplicative of the underlying documents Ostermeier reviewed, he nonetheless draws on his scientific expertise to explain that one would normally see greater variability, and places a gloss on the internal documents, which could assist the jury. Accordingly, the court will not strike this portion of Ostermeier's report.

Fourth, ST challenges Ostermeier's opinion that ST's misreporting quality control test data given to ABS is "inconsistent with scientific principles." (ST's Mot. (dkt. #333) 6, 12-13.) Here, the court agrees with ST that the conclusion that lying about test reports is not consistent with scientific principles rests on common sense, and, therefore, is not helpful to the jury. The court, therefore, will grant this portion of the motion, excluding his opinion.

One final note: in its opposition, ABS also argues that Ostermeier should be allowed to describe the ddPCR tests -- the alternative method for measuring purity underlying

ABS's broader breach of contract counterclaim. While this court rejected this broader breach of contract counterclaim at summary judgment, ABS argues that "[t]hose test results, even if not 'more reliable and accurate' for determining purity than the flow cytometry reanalysis ST historically used, are still relevant as to whether ST did the reanalysis tests correctly and without bias." (ABS's Opp'n (dkt. #378) 9.) Assuming that this testimony all fell within the scope of the broader breach of contract counterclaim for which the court granted ST summary judgment, ST may not have anticipated this angle or opening in bringing its motion. The court is skeptical that mention of the ddPCR tests meet the requirement of Rule 403. Nonetheless, the court will reserve on this specific issue pending a response from ST during the FPTC. Accordingly, this motion is GRANTED IN PART, DENIED IN PART AND RESERVED IN PART.

D. Motion to Try Exclude Opinion Testimony of ABS's Damages Expert Carrier Distler (dkt. #335)

In this motion, ST seeks to exclude testimony of ABS's damages expert Carrie Distler concerning the antitrust-related jury findings and post-trial injunction from the parties' prior litigation. ST argues that this testimony should be stricken as unreliable. Specifically, ST challenges Distler's opinion that "the prices ST charged ABS under the 2012 Semen Sorting Agreement at issue in the prior case . . . were 'artificially inflated' as a result of ST's monopoly power." (ST's Mot. (dkt. #335) 2.) ST explains that while the prior jury found ST possessed monopoly power, the jury was not asked and did not find supracompetitive prices, as this court acknowledged in its post-trial injunction ruling in the '503 case. (*Id.* (citing 3/31/17 Op. & Order ('503 dkt. #772) 69-70).) ST also argues that

because Distler did not conduct her own analysis of the prices in the 2012 Agreement, her conclusion that the pricing was artificially inflated is unsupportable. The court generally agrees.

In response, ABS primarily argues that the 2012 Agreement is an inappropriate basis for Malackowski's royalty analysis, full stop. Fair enough, but nothing in ST's motion precludes Distler from offering this opinion, assuming supported by admissible reasons. Instead, ST's motion addresses whether ABS may introduce the prior jury's antitrust finding and whether that finding forms a sufficient basis for Distler to opine that the pricing in that agreement is suspect. At one point, ABS appears to concede that Distler will not be asked to testify that ST's position as a monopolist impacted its bargaining power, but will instead "limit Ms. Distler's relevant testimony to discussing the reasons why Mr. Malackowski's use of the 2012 Agreement as a starting point (to the extent he is permitted to rely on it) is not a reliable way to assess damages for any infringement of the Cytonome patents." (ABS's Opp'n (dkt. #377) 8.) However, later in its opposition ABS hints that Distler will testify that ST's maintaining a monopoly "is associated with . . . its imposition of anticompetitive contracting terms to maintain its monopoly." (ABS's Opp'n (dkt. #377) 9.) To the extent ABS seeks to introduce the prior jury's antitrust finding and to have Distler rely on that finding, then, as explained above in the motion to exclude Malackowski's testimony on the 2012 Agreement, ABS should make a proffer at the FPTC. If not expressly approved at that time by the court, Distler may not testify on this subject unless ABS seeks advance approval outside of the presence of the jury. (*See supra* Op. § I.D.3.)

As such, this motion is GRANTED Distler may not mention the prior jury's antitrust finding or rely on that finding to critique Malackowski's analysis except as expressly approved by the court. Nothing about this decision, however, precludes Distler from offering other reasons why the 2012 Agreement is an inappropriate starting point for or input in Malackowski's analysis.

E. Motion to Exclude Opinion Testimony of ABS's Expert Dr. Dino Di Carlo Related to Obviousness (dkt. #338)

ST seeks to exclude the testimony of ABS's technical export Dino Di Carlo, Ph.D., on obviousness. As ST explains in its brief, Di Carlo's report primarily addresses his opinion that the patents-in-suit are invalid as anticipated by certain prior art references. With reference to Claims 1 and 15 of the '476 patent and Claim 14 of the '309 patent, DiCarlo also states that the analyzed claim "would have been obvious in view of [the primary reference], alone and/or . . . in view [of another prior art reference]." (ST's Mot. (dkt. #338) 8-9 (citing Di Carlo Rept. (dkt. #129) ¶¶ 338, 862, 1187, 1576, 1641, 1671).) For Claim 11 of the '476 patent, ST contends that Di Carlo's analysis -- limited to three paragraphs -- simply lists prior art references "without providing any of the necessary 'rational underpinnings'—namely, why and how a person skilled would combine the references to achieve the invention." (*Id.* at 10 (citing *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007); *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1573 (Fed. Cir. 2008)).) As such, ST contends that this analysis is too conclusory to be helpful to the jury and should be excluded. (*Id.* at 7 (citing *Innogenetics*, 512 F.3d at 1573).)

In response, ABS argues that ST improperly focuses on the format of Di Carlo's

report, not the substance. Generally, ABS criticizes ST for failing to consider DiCarlo's entire report rather than just the isolated paragraphs in which he offers his conclusions about obviousness. Specifically, ABS points to three sections of the report: (1) a background discussion of each prior art reference, though ABS acknowledges that in light of the court's summary judgment decision (and in effort to streamline the case) only three prior art references remain -- Weigl, Nieuwenhuis 2001 and Nieuwenhuis 2003; (2) an element-by-element comparison of each of the "primary" prior art references to each of the claims at issue -- only four of which remain, Claims 1, 11 and 15 of the '476 patent and Claim 14 of the '309 patent; and (3) the summative obviousness section for each patent, which are the lone paragraphs on which ST bases its motion. (ABS's Opp'n (dkt. #379) 4-5.)

Consistent with ST's organization, ABS then explains how Di Carlo reaches his obviousness conclusion with respect to Claim 11 of the '476 patent to Claims 1 and 15 of the '476 patent, and to Claim 14 of the '309 patent. With respect to Claim 11 of the '476 patent, ABS directs the court to Di Carlo's analysis of how the Hara prior art reference provides the "missing information" -- namely, a "primary sheath flow channel divides into a first subchannel and second subchannel upstream of the primary focusing region" -- and also, with respect to the same discussion for each of the primary prior art references, explains how one skilled in the art would combine these references, and why one skilled in the art would have been motivated to do so. (*Id.* at 7-13.)[23] As for the remaining claims

[23] ABS also clarifies that Di Carlo is not relying on Micronics 2001 to provide the "missing information," thus mooting part of ST's argument.

in-suit, Di Carlo's report provides sufficient detail as to the relevance of Weigl to support his obviousness conclusion. (ABS's Opp'n (dkt. #379) 14-16; *see also id.* 11.) *See Game & Tech. Co. v. Activision Blizzard Inc.*, 926 F.3d 1370, 1381 (Fed. Cir. 2019) ("[A] patent can be obvious in light of a single prior art reference if it would have been obvious to modify that reference to arrive at the patented inventions.").

Based on a review of Di Carlo's entire report, and not just those discrete paragraphs highlighted by ST, the court concludes that Di Carlo's obviousness opinions are not conclusory. Therefore, this motion is DENIED.

F. Motion to Exclude Testimony Regarding Design Arounds and Non-Infringement (dkt. #344)

This motion concerns testimony about design-arounds and non-infringing alternatives. ST seeks an order that would (1) exclude any testimony that ABS designed around the asserted patents on the basis that its fact witnesses invoked attorney-client privilege in refusing to answer questions as to whether the single sheath chip or SSC-B chip are design-arounds; and (2) limiting any evidence or testimony about non-infringing alternatives to the damages phase, on the basis that this evidence is only relevant to that phase, and, even then, should be limited to expert testimony.

In response, ABS points out several flaws in ST's arguments. *First*, with respect to the design-around argument, while ABS witnesses invoked privilege in refusing to answer the ultimate question of whether a particular chip constituted a design-around, these witnesses -- in particular, Dr. Lightner, Dr. Appleyard, and Dr. Xia -- provided extensive testimony as to these new designs, how they compared to the GSS chip, and how they

compared to each other. More specifically, they testified that the "the single sheath chip [is] essentially the same as the [GSS] chip . . . with that outer loop deleted," and the SSC-B chip differed from the single sheath chip design because in the SSC-B chip "the side tapering . . . starts and ends at the same points as in the ramp structure." (ABS's Opp'n (dkt. #344) 8.)

Accordingly, ABS may present testimony as to how the designs differ, allowing a reasonably jury to infer that ABS intentionally attempted to design around the alleged infringing GSS chip for purposes of determining whether any infringement was willful. Of course, as ABS acknowledges in its opposition, it will *not* be allowed to "present any testimony at trial that its witnesses refused to provide during discovery on grounds of privilege [or] disclose any privileged information about the [single sheath] and SSC-B chips." (*Id.* at 13.) Finally, while the court will not exclude testimony about design-arounds, this testimony is only relevant to the willfulness phase of trial, as both parties acknowledge.

Second, as for evidence and testimony about noninfringing alternatives, ST argues that this evidence should be limited to the damages phase, and even then, should only be offered through expert testimony. Unsurprisingly, ABS disagrees with both positions. ABS argues that this evidence is relevant to commercial success -- a secondary consideration for obviousness -- to rebut Dr. Vacca's testimony that ABS's embodiments of the patent-in-suit are commercially successful. Specifically, ABS argues that the SSC-B chip, as a non-infringing alternative, "show[s] that there is no 'nexus' between the any allegedly patented features of the chip and the success of ABS's products because ABS could produce the

products just as well by using a non-infringing alternative." (ABS's Opp'n (dkt. #344) 14.) The court is inclined to agree. If ST opens the door by offering testimony as to the commercial viability of the GSS or single sheath chip, then the court is inclined to allow ABS to present evidence that SSC-B is a noninfringing alternative. Since ST did not front this argument in its motion, however, the court will RESERVE on this portion of the motion pending further argument at the FPTC.

As for ST's argument that this testimony should only come in through an expert, the court disagrees. While the infringement analysis should be left to an expert, ABS is free to present fact testimony relevant to this inquiry, particularly testimony within the personal knowledge of ABS employees concerning the features or elements of the purported non-infringing alternatives. Accordingly, this portion of the motion will be denied.

For these reasons, this motion is DENIED IN PART AND RESERVED IN PART.

G. Other Motions *in Limine* (dkt. #341)

1. Bar evidence, testimony or argument about ST being a monopolist, etc.

ST seeks to bar any reference to ST being a "monopolist and/or maintaining monopoly power through anticompetitive means, specifically including through any purportedly anticompetitive or otherwise monopolistic aspect of the 2012 Semen Sorting Agreement." (ST's Mot. (dkt. #341) 2.) ST argues that "the antitrust-related jury findings and injunction from *ABS I* have no bearing on any issue presently in dispute," and that introduction of such evidence, testimony or evidence would be to "inflame the jury and cloud the issues." (*Id.* at 3.) In response, ABS "agrees that, during the liability phase, the fact that ST is an adjudicated monopolist that has maintained its monopoly through

unlawful exclusionary conduct should not be relevant to any issue the jury will be asked to decide." (ABS's Opp'n (dkt. #385) 6.) But even then, ABS maintains that if ST opens the door by "suggesting that ST's success has been built on ingenuity and risk-taking," then ABS argues than it "ought to be entitled to expose, through cross-examination, that whatever might have led to its successes in the company's early years, it engaged in unlawful, anticompetitive conduct starting in 2012 to maintain its monopoly." (*Id.* at 7.)

For reasons already explained in addressing ABS's motions, the court is skeptical that any finding or monopolistic behavior – which the jury in ABS I found was limited to locking its customers as potential competitors) into long-term, non-compete agreements – is likely to be substantially less relevant than it is to be confusing and unfairly prejudicial to this jury. Regardless, the court agrees that ST would have to open the door significantly more than claiming ingenuity and risk-taking to warrant introduction of the jury's antitrust finding. General, contextual testimony about ST's history and innovation in sex-sorting of bull semen would certainly not be opening the door. Instead, ST would have to introduce testimony specifically about the reasons for ST's dominance *after* 2012 before that door could arguably even be considered ajar. Even so, ST is warned to tread carefully in introducing any evidence on this topic. The court, therefore, will GRANT this motion with respect to the liability phase of trial, although ABS may argue at side bar or preferably at a break in the trial that introduction of this evidence is warranted if it believes in good faith that ST has actually opened the door.

With respect to the damages phase, ABS contends that introduction of this evidence is necessary to poke holes at ST's expert's damages opinion, premised in part on the 2012

Semen Sorting Agreement. For the reasons explained in deciding the *Daubert* challenges to Malackowski's and Distler's opinions, the court will GRANT this motion, with the caveat that ABS may make a proffer at the FPTC as to *specific* testimony that might be introduced through Distler.

2. Bar evidence, testimony or argument that ST had improper or anticompetitive motives for bringing '446 action

The second motion also concerns monopoly references. In this one, ST seeks an order barring ABS from introducing evidence or testimony or otherwise arguing that ST had an improper or anticompetitive motive for bringing the '446 lawsuit. ABS does not oppose this motion if "narrowly framed." As such, this narrow motion -- precluding ABS from introducing evidence or argument that ST brought the '466 case for anticompetitive or improper reasons -- is GRANTED AS UNOPPOSED.

3. Bar evidence, testimony or argument that that ABS's GSS system provides a "choice" that frees consumers from an unlawful monopolist

Finally, on the same general topic of references to ST being a monopolist, ST also seeks to bar any evidence, testimony or argument that "ABS's GSS chip provides a 'choice' that frees consumers from an unlawful monopolist." (ST's Mot. (dkt. #341) 7.) ST argues that this "'customer choice' theme is irrelevant and prejudicial." (*Id.*) ST also argues that the jury in ABS I implicitly rejected this theory in their finding that there was no antitrust injury.

In response, ABS argues that it should be allowed to introduce evidence that ST was the "sole supplier" (without labeling it a "monopolist") and that ABS's introduction to the

market provided consumers a choice for at least two reasons: (1) ST's role as a sole supplier helps explain ABS's reasons for not investigating purity concerns earlier, thus rebutting ST's defenses of mitigation and waiver to ABS's breach of contract counterclaim; and (2) ABS's success in the market could be due to consumer-excitement about a second option and not due to the patented invention, relevant to a secondary consideration of obviousness. While the court is concerned about the potential to confuse this jury, there is obviously some merit in ABS's position as well. Accordingly the court will RESERVE on this motion pending further argument at the FPTC.

4. Bar evidence, testimony or argument that mentions the alleged "sabotage" or contamination of ABS's semen extender by chloroform

Shifting away from the monopoly category of motions, ST seeks to bar any reference to alleged "sabotage" or contamination of ABS's semen extender by chloroform, including any mention of police involvement or the suspicion that an ST employee was involved. ST explains that in July 2017 about ST's alleged quality control breach, Jesus Martinez, ABS's Global Director of IntelliGen Technologies, claimed that ABS's quality control investigation was prompted by suspected "sabotage" of an extender fluid used in ABS's conventional semen product. ABS had contacted the police, but the investigation did not result in any finding that an ST employee was involved in any alleged sabotage. ST contends that this evidence should be excluded because the allegations are unfounded, irrelevant and prejudicial.

In response, ABS argues that its discovery in May 2017 that a large quantity of its conventional semen extender had been contaminated with chloroform is relevant to its

breach of contract counterclaim. ABS provides additional context, namely that this semen extender was held at ABS's lab, co-located next to the ST lab at ABS's Deforest facility. ABS contends that this discovery prompted it to "take a close look at the product that ST had been supplying," and that that review raised concerns about purity, underlying ABS's breach of contract counterclaim. (ABS's Opp'n (dkt. #385) 14.) ABS argues that this evidence could counter ST's attempt to "put at issue the timing and motivation of ABS's investigation" or any evidence or argument that "ABS made up its breach-of-contract claim either as a pretext for ending the supply relationship or in response to ST's complaint in this case." (*Id.*)

The court agrees with ST that the contamination of the extender with chloroform is too far afield from ABS's counterclaim to be relevant, especially given that the contaminated product was the conventional semen extender, not the sexed semen extender relevant to ABS and ST's contractual relationship. Moreover, the mention of possible sabotage or involvement on the part of ST or its personnel would necessarily be unduly prejudicial given the lack of relevance.

If ST introduces evidence or argues that ABS dragged its feet in investigating quality concerns, then ABS is free to introduce evidence and argument that ABS acted promptly once it had the means to conduct its own tests, without needing to mention the contamination. If ST introduces evidence or argues that ABS's motivations for raising these counterclaims were improper, then ABS may mention contamination of the conventional semen extender as the basis for prompting a broader quality control review, but even then *without* mentioning any criminal investigation or concerns about sabotage

on the part of ST.

As such, this motion is GRANTED with the caveats noted above.

5. Bar evidence, testimony or argument that suggests ST is generally litigious

ST also moves to exclude any evidence, testimony or argument that suggests ST is "generally litigious," on the basis that doing so it irrelevant, and, even if relevant, should be excluded under Rule 403. (ST's Mot. (dkt. #341) 11.) ABS generally agrees with this motion, but with three caveats.

First, ABS argues that it should be allowed to introduce evidence of what damages ST has sought in the past for infringement of its patents, though ABS acknowledges that it can introduce this evidence without referring specifically to litigation. With respect to this first caveat, the court agrees with ABS that evidence of ST's prior positions on licensing fees could be relevant to the damages phase of trial. As such, in granting this motion, ABS is not precluded from introducing such evidence without suggesting or arguing this is proof of ST's broader "litigiousness" or words to the same offense.

Second, ABS argues that if ST pursues a "waiver" or "failure to mitigate" defense with respect to ABS's breach of contract claim, it should be permitted to argue that "it was dangerous to raise concerns earlier because ST was the only supplier of sexed semen and was known to be litigious." (ABS's Opp'n (dkt. #385) 16.) The court has already addressed ABS's ability to introduce evidence that ST was historically the sole supplier of sorting semen sex technology, and there is no need to address this further. ABS's interest in introducing evidence that ST was known to be litigious as a response to a waiver or

failure to mitigate defense appears to be a far poorer fit. Nonetheless, the court will RESERVE on this caveat pending argument and clarification at the FPTC.

Third, ABS contends that "any relief on this motion should be mutual: just as ST should not (without opening the door) be referred as a serial litigant, ABS should not be referred to as having faced infringement litigation with ST before." (ABS's Opp'n (dkt. #385) 15.) This appears to be a reasonable request, but because ABS did not raise this request in its own motion *in limine*, the court will RESERVE on this as well, pending argument at the FPTC.

For these reasons, this motion is GRANTED IN PART AND RESERVED IN PART.

6. Bar evidence, testimony or argument that appeals to local prejudice, including any reference to ST as "out-of-towners" and ABS being "local"

ST seeks to exclude any reference to "ST as 'out-of-towners,' 'foreigners,' or 'out-of-state plaintiffs' and references to ABS as 'locals' or being 'from here'," on the basis that such testimony would be improper and highly prejudicial. (ST's Mot. (dkt. #341) 13.) ABS does not oppose this motion, other than to note that as it did in *ABS I*, ABS "expects to make references to the company's background and where its witnesses reside, which will include references to the Madison area." (ABS's Opp'n (dkt. #385) 16.)

This motion is GRANTED AS UNOPPOSED, but witnesses may mention the location of ABS and counsel may ask where witnesses reside, without stressing that ABS or the witnesses are "local."

7. Bar testimony of experts that exceeds the scope of their reports

ST next asks the court to apply Federal Rule of Civil Procedure 26(a)(2), and

exclude any expert testimony that exceeds the scope of an expert's report. ABS does not oppose this motion, other than to note its challenge to Dr. Vacca's testimony raised in its motion in limine (dkt. #334), which the court already addressed above. Accordingly, this motion is GRANTED AS UNOPPOSED.

8. Bar introduction of advice of counsel opinions other than the written opinions produced

ST seeks to exclude advice of counsel opinions that were not previously produced. As context, ABS disclosed that it intends to rely on advice of counsel opinions to defend against ST's claims of willful infringement, and produced documents Bates labeled ABS_2017_00087287 to ABS_2017_00088759 for this purpose. ST contends that references by ABS's counsel during Dr. Lightner's deposition raised some concern that ABS may have obtained legal opinions not disclosed to ST during discovery, thus prompting this motion.

In response, ABS explains that it produced "every written opinion of counsel that ABS sought relating to [the Cytonome] patents," but that it excluded opinions of outside litigation counsel, and it will not present evidence at trial suggesting that it relied on these opinions. The court assumes that the references ST makes to Dr. Lightner's deposition touches on these non-produced opinions of outside litigation counsel that ABS did not produce and does not intend to rely on or otherwise introduce at trial.

As such, ABS does not appear to oppose this motion, but it argues that to the extent ST also seeks to exclude "internal discussions and deliberations at the company regarding its legal advice" -- topics explored by ST in depositions -- then ST's motion reaches too far,

and it would oppose a motion to exclude "*non-written* communications." (ABS's Opp'n (dkt. #385) 18.)

The court does not construe ST's motion to seek exclusion of internal communications about the legal opinions; rather, ST simply seeks to exclude legal opinions other than the six previously produced by ABS. As such, this motion is GRANTED AS UNOPPOSED, but this decision does not preclude ABS from introducing evidence of internal discussions about these legal opinions already disclosed in discovery.

9. Bar evidence, argument or testimony regarding the Appleyard '100 patent or suggesting that ABS does not infringe the patents-in-suit because it has obtained a patent on the GSS system

ST seeks to exclude introduction of an ABS patent, U.S. Patent No. 9,588,100 to David Appleyard, et al., (the "Appleyard '100 patent") that ABS contends covers the accused GSS system. ST argues that this evidence and any testimony or argument about it is not relevant, citing *Atlas Powder Co. v. E.I. Du Pont De Nemours & Co.*, 750 F.2d 1569 (Fed. Cir. 1984), in which the Federal Circuit held that a presumption of non-infringement does not arise from the issuance of a patent on an accused product. *Id.* at 1580-81. (ST's Mot. (dkt. #341) 16.) In addition to arguing that such evidence is not relevant, ST also contends that the presentation of ABS patents "may unduly distract and confuse the jury." (*Id.* at 17.)

In response, ABS points out that such evidence may be relevant to a claim of infringement under the doctrine-of-equivalents, but contends that since ST is not pursuing such a claim here, it does not oppose the motion to the extent it is limited to its express language, namely that ABS is precluded from arguing or suggesting that it does not infringe

the patents in suit because it has obtained its own patent. (ABS's Opp'n (dkt. #385) 18-19.)

In its motion, however, ST also sought to exclude any reference to the Appleyard '100 patent. In *ABS I*, the court barred any "[a]rgument that any patent owned by ABS negate infringement of the patents asserted by ST in this case," while allowing ABS to "generally mention that it had filed for patent applications related to its work on semen sorting." (7/27/16 Order ('503 dkt. #593) 3.) ABS apparently wants to introduce the same sort of evidence here, but fails to explain why the Appleyard '100 patent is relevant.

As such, ST's motion is GRANTED IN PART AND RESERVED IN PART. The motion is granted as unopposed as to ST's request to bar ABS from arguing or suggesting that it does not infringe because it obtained its own patent; the court will reserve on whether ABS may mention the Appleyard '100 patent (or other patents or application) pending argument at the FPTC.

10. Bar evidence, argument or testimony that criticizes the USPTO and specifically lack of time, diligence or expertise of examiners

Next, ST seeks to preclude ABS from offering evidence, argument or testimony that disparages the USPTO, and specifically, criticizes the USPTO for the amount of time spent prosecuting patents or notes the duration of examination or other concerns. ABS does not oppose this motion. Accordingly, this motion is GRANTED AS UNOPPOSED.

11. Bar evidence, argument or testimony of claims or defenses dismissed before trial

In this motion, ST seeks to exclude any evidence, argument or testimony of claims

or defenses dismissed -- either by the court at summary judgment or by waiver or stipulation -- prior to trial. ST lists a number of withdrawn and dismissed claims and defenses by the parties and by the court. (ST's Mot. (dkt. #341) 20-22.)

In response, ABS agrees that these dismissed claims and defenses should not be introduced in the liability and damages phase, although it contends that reference to the dismissed claims may be relevant to the willfulness phase. (This assumes that willfulness is tried separately; if it is tried as part of damages, then ABS would seek to introduce it at that time.) Specifically, ABS argues that the dismissal of five of ST's asserted patents from this case is relevant to willfulness, because it shows "the reasonableness of ABS's good faith belief that it was not infringing any valid ST patent." (ABS's Opp'n (dkt. #385) 20.)

Accordingly, as for the liability and damages phases of trial, this motion is GRANTED AS UNOPPOSED. Neither party may reference dismissed claims or defenses during those phases of trial. As for the willfulness phase, the court will RESERVE on this portion of the motion pending a specific proffer as to what ABS would propose to introduce at the FPTC.

12. Bar any non-disclosed noninfringement or invalidity argument or prior art reference

ST moves to exclude ABS "from introducing evidence, making arguments or offering or eliciting testimony referring to any non-infringement argument, invalidity argument or purported prior art that it failed to disclose in its invalidity contentions or expert reports." (ST's Mot. (dkt. #341) 22.)

ABS does not oppose ST's motion to the extent that it seeks to preclude

introduction of any expert theories not previously disclosed (similar to ST's motion in limine no. 7 above), or any invalidity theories or arguments. ABS, however, argues that ST's motion as to ABS's non-infringement arguments is unsupportable. This argument is more fully flushed out in response to ST's motion in limine no. 16, in which it seeks to exclude any evidence or argument that ABS does not infringe the Cytonome patents. The court, therefore, will address this portion of the motion below.

As such, ST's motion barring ABS from introducing an invalidity argument not disclosed in its invalidity contentions or prior art not disclosed in invalidity contentions or expert reports is GRANTED AS UNOPPOSED. As for any bar to ABS introducing non-infringement arguments, that portion of the motion is DENIED for the reasons explained below on ST's motion in limine no.16.

13. Bar evidence, argument or testimony inconsistent with the court's claim construction

ST seeks an order precluding ABS from introducing any evidence, testimony or argument that is contrary to or inconsistent with the court's claim constructions. In its motion, ST highlights certain testimony of the Cytonome inventors, Drs. Gilbert and Bunner, arguing that this testimony is not relevant and prejudicial because it uses a "definition of 'focusing' . . . that encompass the disclaimed sample injection." (ST's Mot. (dkt. #341) 26-27.) In response, ABS does not oppose this motion, but argues that ST's characterization of Drs. Gilbert and Bunner's deposition testimony is incorrect. Rather than attempt to parse the parties' arguments in this motion in limine, the court will instead decide which portions, if any, of Drs. Gilbert and Bummer's deposition testimony is

contrary to or inconsistent with the court's claim construction of "focusing" in the context of ruling on objections to deposition designations.

As such, this motions is GRANTED AS UNOPPOSED, but without prejudice to ABS designating deposition testimony and ST offering objections.

14. Bar any reference to ST's infringement claims foreclosed by the court's claim construction and summary judgment opinion

ST also seeks an order excluding any reference to ST's infringement claims foreclosed by the court's claim construction and summary judgment opinion, on the basis that such evidence is not relevant and would confuse the jury. In response, ABS argues that ST's motion is overbroad, pointing to areas ABS wishes to explore at trial.

First, ABS contends that ST's expert Dr. Vacca's previously disclosed opinions are relevant to ST's infringement claims. Specifically, ABS argues that it should be allowed "to explore any opinion Dr. Vacca has offered that conflicts with or casts doubt on opinions he offers at trial, regardless of whether those opinions were offered in connection with a specific issue that remains in this case." (ABS's Opp'n (dkt. #385) 28.) As alluded to above in ABS's motion for clarification of the court's claim construction order, ABS points to Vacca's opinion that Detail B of ABS's GSS chip, which Vacca identified as the first focusing region -- a position rejected by the court in light of its claim constructions, "meets the 'extending downstream' limitation because it is a 'region adjacent to and downstream from a sample injection site.'" (*Id.*)

The court agrees that excluding any reference to previously-proposed theories of patent claims does not preclude ABS from impeaching Vacca based on prior, inconsistent

opinions he may have previously expressed. In other words, if Vacca testifies that the "extending downstream" limitation is satisfied in a way that conflicts with any of his earlier descriptions as to how the patented invention functions, ABS may cross-examine him based on those descriptions. What ABS may not do is impeach Vacca with an earlier interpretation of the patent claims that has been subsequently rejected by the court. In an abundance of caution, ABS may want to request a side-bar before exploring any opinions not offered by ST in support of its infringement claim at trial.

Second, ABS argues Vacca's prior opinion that "the sample is focused in all four directions at Detail B (and again from above at Detail C)" is relevant to damages, since ST would "necessarily" only be able to seek "a royalty based on any incremental contribution of adding a third or fourth element in the region at Detail D." (ABS's Opp'n (dkt. #385) 29.) Before deciding whether this reading of Vacca's prior opinion is accurate or relevant to any damage issue, the court will allow ST to respond at the FPTC.

Third, ABS seeks to introduce Vacca's position that the ramp and taper in Detail D *together* constitutes the second focusing region, rather than his current view that the ramp is one region and the taper is the second. The court is hard-pressed to understand how Vacca or another witness could be impeached based on a prior, *alternative* position that the ramp and taper were one region simply because the court rejected it. As such, the court will grant this portion of the motion, but will reserve pending further argument at trial.

As set forth above, this motion is GRANTED IN PART, DENIED IN PART AND RESERVED IN PART. If Vacca opens the door by testifying at trial in a way that conflicts with prior descriptions of the patented inventions offered in his reports, ABS is free to

impeach him by referencing those descriptions, but not alternative opinions now rejected by the court unless specifically proffered and approved outside the presence of the jury. In particular, the court reserves on the relevance of the prior opinion referenced above for further discussion at the FPTC.

15. Bar argument or evidence disputing ABS's admission that it did not discount the price of straws of ST-produced semen due to alleged quality-control defect

In this motion, ST seeks an additional concession from ABS that it will not introduce evidence or otherwise argue that it discounted the prices of ST-produced semen straws due to alleged quality-control defects. In its response, ABS assures ST again that it will not, and also points out that this motion is unnecessary. While the court agrees that it was unnecessary, it will nonetheless GRANT IT AS UNOPPOSED.

16. Bar argument or evidence that ABS does not infringe the Cytonome patents

Finally, ST moves in limine for an order excluding any argument or evidence that ABS does not infringe the Cytonome patents. At first glance, as ABS points out in response, this seems to be an untimely motion for summary judgment. Regardless, the motion lacks merits.

In light of the court's summary judgment and claims construction order, ST represents that it will pursue two infringement theories with respect to each of the two, remaining patents: (1) for the GSS chip only, Detail C is the primary focusing region or first focusing step and either the ramp of taper in Detail D is the second focusing region or step; and (2) for both the GSS chip and the single sheath chip, the ramp is the first primary

focusing region or first focusing step and the taper is the second focusing region or step. ST maintains that ABS's expert Dr. Di Carlo did not offer a non-infringement theory if Detail C (in the GSS chip) is the primary focusing region or first focusing step, or opine that the ramp and taper cannot constitute two regions or fulfill two steps.

In a lengthy response, ABS both challenges ST's position that ABS is required to put forth evidence of non-infringement affirmatively and ST's argument that ABS has failed to disclose expert testimony to address ST's current infringement theories as described above. A lot of ABS's response concerns ST's changing infringement contentions and ABS's position that ST failed to disclose either of its current contentions before the opening expert reports on liability were due. The court credits this argument to a certain extent, but also recognizes that both sides are adapting their respective positions in light of the court's opinion and order on summary judgment and claims construction. More to the point, ABS acknowledges that in his August 27, 2018, report, Dr. Di Carlo *did* address an alternative theory where the ramp and taper are "not considered together as a secondary focusing region, pointing out that this would be inconsistent with other statements in Vacca's report. (Di Carlo Rept. (dkt. #132) ¶ 329.) Di Carlo also opined that "the connected ramp and taper elements . . . together form a single focusing region." (Dec. 11, 2018 Rept. (dkt. #251) 28 n.76.) Moreover, with respect to the infringement theory for the GSS chip, where Detail C is the primary focusing region or first focusing step, as described above in the order on ABS's motion for leave to file a supplemental report of Dr. Di Carlo, the court has already concluded that Di Carlo adequately disclosed an opinion that the ramp focuses from the top and bottom, which (if accepted by the jury) would

mean this infringement theory fails on the direction limitation. (*See supra* Op. § I.A.)

Even if it lacked expert testimony to opine on non-infringement, as ABS argues more generally, it would still be entitled to put ST to its proof, by cross-examining its experts and pointing out inconsistences and flaws in ST's positions. Indeed, as ABS pointed out in response to an earlier motion in limine, the court's standard order requires the plaintiff to provide its core contentions regarding infringement to the defendant, but there is no similar requirement of the defendant to disclose its non-infringement contentions. (ABS's Mot. (dkt. #385) 21.) Regardless, because a reasonable jury could reject ST's infringement theories, this motion is DENIED.

ORDER

IT IS ORDERED that:

1) Defendants and counter claimants ABS Global, Inc. Genus, PLC, and Premium Geneticks (UK) Ltd.'s motion for leave to serve supplemental expert report of Dino Di Carlo, Ph.D. ('503 dkt. #890; '446 dkt. #286) is GRANTED IN PART AND DENIED IN PART.

2) Plaintiffs and counter defendants Inguran, LLC, Cytonome/ST, LLC and XY, LLC's motion for leave to file a sur-reply ('503 dkt. #912; '446 dkt. #307) is GRANTED.

3) Defendants' motion to clarify the court's claim construction order ('503 dkt. #925; '446 dkt. #320) is GRANTED.

4) Defendants' motion to try willfulness separately ('503 dkt. #929; '446 dkt. #324) is GRANTED.

5) Defendants' motion to exclude inadmissible opinions of ST's damages expert James E. Malackowski ('503 dkt. #934; '446 dkt. #329) is GRANTED AS UNOPPOSED IN PART, DENIED IN PART AND RESERVED IN PART.

6) Defendants' motion to exclude inadmissible opinions of ST's technical expert Giacomo Vacca, Ph.D. ('503 dkt. #939; '446 dkt. #334) is GRANTED IN PART AND DENIED IN PART.

7) Defendants' other motions in limine ('503 dkt. #944; '446 dkt. #339) are GRANTED IN PART, DENIED IN PART AND RESERVED IN PART.

8) Plaintiffs' motion to exclude testimony of Matthew Ebersole ('503 dkt. #928; '446 dkt. #323) is RESERVED.

9) Plaintiffs' motion to exclude enablement-related fact testimony ('503 dkt. #933; '446 dkt. #328) is RESERVED.

10) Plaintiffs' motion to exclude opinion testimony of Dr. Charles Ostermeier ('503 dkt. #938; '446 dkt. #333) is GRANTED IN PART, DENIED IN PART AND RESERVED IN PART

11) Plaintiffs' motion to exclude opinion testimony of ABS's damages expert Carrie Distler ('503 dkt. #940; '446 dkt. #335) is GRANTED.

12) Plaintiffs' motion to exclude opinion testimony of ABS's expert Dr. Dino Di Carlo ('503 dkt. #943; '446 dkt. #338) is DENIED.

13) Plaintiffs' motion to exclude testimony regarding design around and non-infringement ('503 dkt. #949; '446 dkt. #344) is DENIED IN PART AND RESERVED IN PART.

14) Plaintiffs' other motions in limine ('503 dkt. #946; '446 dkt. #341) are GRANTED IN PART, DENIED IN PART AND RESERVED IN PART.

Entered this 14th day of August, 2019.

BY THE COURT:

/s/

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WILLIAM M. CONLEY
District Judge